



Dr. Hadeer Ibrahim Mohamed

Assistant professor- Biophysics

Personal Data

Nationality | Egyptian

Date of Birth | 18th May 1980

Department | Neuroscience Technology- College of Applied Medical Science-Jubail

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Language Proficiency

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

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2013	Ph.D. in Biophysics (Biomaterials)	Institute De Physique et Chimie des Materiaux de Strاسبoug (IPCMS), Strasbourg University	Strasbourg, France.
2007	M.Sc. in Biophysics	Faculty of science- Ain Shams University (ASU)	Cairo, Egypt.
2001	B.Sc. in Biophysics	Faculty of science- Ain Shams University (ASU)	Cairo, Egypt.

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

PhD	Compound coatings of Ca-phosphates and/ titanate on metallic implants for medical applications
Master	Biophysical studies on treated corals as bioactive materials
Fellowship	



Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work		Date	
			From	To
Assistant professor	Department of Neuroscience Technology	College of Applied Medical Sciences (CAMS) in Jubail, Imam Abdul Rahman Bin Faisal University (formerly University of Dammam), Kingdom of Saudi Arabia	Sep. 2017	To date
Assistant professor	Basic Science Department	Deanship of preparatory year and supporting studies, Imam Abdul Rahman Bin Faisal University (formerly University of Dammam), Dammam, Kingdom of Saudi Arabia	Feb. 2017	Sep. 2017
Associate professor	Department of physics	Faculty of Science, Ain Shams University, Cairo, Egypt	May 2021	To date
Assistant professor	Department of physics	Faculty of Science, Ain Shams University, Cairo, Egypt	Dec. 2013	To date
Research student	Institute De Physique et Chimie des Materiaux de Strasbourg (IPCMS), Strasbourg university (Strasbourg, France)		Sep., 2010	June, 2013
Lecturer	Department of physics	Faculty of Science, Ain Shams University, Cairo, Egypt	Sep. 2007	Dec. 2013
Research student	Department of Ceramics and Biomaterials	National Research Center (NRC), Giza, Egypt	Sep., 2003	Sep., 2006
Teaching Assistant	Department of physics	Faculty of Science, Ain Shams University, Cairo, Egypt	Jan., 2001	Sep. 2007

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-	Insaf Abdi, Amina Emam, Hadeer Ibrahim , Monika Bansal, Saqlain Raza	Teaching And Learning Before, During And The Current Period Of COVID-19 Pandemic: How The Academic Performance Of Students Are Impacted?	Multicultural Education, 2023
2-	Somia B. Ahmed, Hadeer I. Mohamed , Abeer M. Al-Subaie, Ahoud I. Al-Ohali and Nesrine M.R. Mahmoud	Investigation of the antimicrobial activity and hematological pattern of nano-chitosan and its nano-copper composite	Scientific Reports, 2021



3-	Nesrine M.R. Mahmoud, <u>Hadeer I. Mohamed</u> , Somia B. Ahmed, Sultan Akhtar	Efficient biosynthesis of CuO nanoparticles with potential cytotoxic activity	Chemical Paper, 2020
4-	Menna Mohamed, Ibrahim H. Ibrahim, Nermin Raafat, <u>Hadeer I. Mohamed</u> , Abdelsattar M. Sallam	Synthesis of CuO Nanoparticles using Aloe Vera Leaf Extract and its cytotoxic effects on human carcinoma cells.	Nanomedicine and Nanotechnology, 2020
5-	M.E. Moussa, <u>Hadeer I. Mohamed</u> , Mohamed Waly, G.S. Al-Ganainy, A.B. Ahmed, M.S. Talaat	Comparison study of Sn and Bi addition on microstructure and biodegradation rate of as-cast Mg-4wt% Zn alloy without and with Ca-P coating.	Journal of Alloys and Compounds, 2019
6-	Amr El-Sawy, Nour F. Attia, <u>Hadeer I. Mohamed</u> , Mona. Mohsen, M. Hassan Talaat	Innovative coating based on graphene and their decorated nanoparticles for medical stent applications	Materials Science & Engineering C, 2018
7-	<u>Hadeer I. Mohamed</u> , Mohamed E. Moussa, Mohamed A. Waly, Gamilla S. Al-Ganainy, Aya B. Ahmed, Mona S. Talaat	Effect of Adding Sb on Microstructure, Mechanical Properties, and in Vitro Degradation Behavior of as Cast Mg-4wt% Zn Alloy for Medical Application	Journal of Surface Engineered Materials and Advanced Technology, 2017
8-	<u>Hadeer I. Mohamed</u>	An Overview of Orthopedic Implants	Mathews Journal of Orthopedics, 2016
9-	<u>Hadeer I. Mohammed</u> , Adele Carrado, Wafaa I. Abdel-Fattah	Noble metals' role in autocatalytic phosphate coatings o TAV alloys. I. Ag functionalization of autocatalytic phosphate deposition on TAV alloys	Surface and coating technology, 2015
10-	Rawda M. Badawy and <u>Hadeer I. Mohamed</u>	Chitin extraction, Composition of Different Six Insect Species and Their Comparable Characteristics with That of the Shrimp	Journal of American Science, 2015
11-1	Van Quang Le, Geneviève Pourroy, Andrea Cochis, Lia Rimondini, Wafa I Abdel-Fattah, <u>Hadeer I Mohammed</u> , Adele Carradò	Alternative technique for calcium phosphate coating on titanium alloy implants.	Biomatter, 2014
12-	<u>Hadeer I. Mohammed</u> , Abdel Sattar M.Sallam, El-Sayed M. El-Sayed, Mona Salah Talaat, Jacques Faerber, Genevieve Pourroy, Thierry Roland, Wafa I.	Ca-P coating on titanium alloy by autocatalytic route.	Bioinspired, Biomimetic and Nanobiomaterials, 2012



	Abdel-Fattah and Adele Carradò		
13-	H. I. Mohammed , W. I. Abdel-Fattah, M. El-Sayed, M. S.Talaat, A.S. M.Sallam, J.Faerber, G.Pourroy, T.Roland and A. Carradò	Influence of heat treatment on Ti6Al4V for biomimetic biolayer	Bioinspired, Biomimetic and Nanobiomaterials, 2012
14-	Wafaa.I. Abdel-Fattah, A.M.Sallam, I.H.Ibrahim, H. Ibrahim	AC Electric Conductivity and Biochemical Analyses of Physiologic Solutions to Follow Biomimetic Coatings on Corals Impregnated with Ag or Zn or Sr Ions.	Open Biomaterial, 2009
15-	WafaI.Abel-Fattah, G.T.El-Bassyouni, Hadeer Ibrahim	Biomimetic coating of corals treated with sodium hypochlorite compared to calcium hypochlorite	Egyptian journal of biomedical Science, 2008



Refereed Scientific Research Papers Accepted for Publication

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1-	M. E. Moussa, Hadeer I. Mohamed , Mohamed A. Waly, Gamilla S. Al-Ganainy, Mona S. Talaat and Aya B. Ahmed	Preparation and Characterization of Mg based Alloys for Bone Substitution	Third Arab conference on biophysics, 27-29 Sep. 2016 Academy of scientific Research- Cairo-Egypt
2-	Hadeer I. Mohammed* , Adele Carrado & Wafa I. Abdel-Fattah	Noble metals' role in autocatalytic phosphate coatings on TAV alloys	1 st ESSTB International Conference, Transfer of Biomaterials into Technology, March 1-2, 2015 , National Research center, Giza, Egypt.
3-	Hadeer I. Mohammed* , Abdel-Sattar M. Sallam, El-Sayed M. El-Sayed, Mona S. Talaat, Adele Carrado & Wafa I. Abdel-Fattah	Innovative Auto-Catalytic Routes for Including Bioactive Coatings on Ti6Al4V Biomedical Alloy with Different Roughness	International Conference in Nanotechnology, Biotechnology and Spectroscopy , ICNBS Egypt 2013 , 29 Nov. -01 Dec. 2013, Cairo, Egypt
4-	A. Carrado* , H. I. Mohammed, T. Roland, J. Faerber, G.Pourroy, W. Abdel-Fattah	An innovative autocatalytic-biomimetic deposition route to produce calcium-phosphate on titanium implant.	THERMEC'2011, International Conference on Processing & Manufacturing of Advanced Materials; processing, fabrication, properties, applications. Quebec City, Canada, Aug.1-5, 2011.



Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1-	Hadeer I. Mohamed*, Abeer M. Al-Subaie, Nesrine M.R. Mahmoud, Somia B. Ahmed Supported by Deanship of Scientific Research- IAU- 2019-224-AMSJ	Synthesis and evaluation of hematological and anti-bacterial activity of natural extracted chitosan	2021
2-	Mona Mohsen*, Mohamed Hassan Talaat, Abdel Sattar M.Sallam, Hadeer I. Mohamed, Amira Ali Supported by Ain Shams University 2016	The enhancement of metallic stents properties using natural materials coat.	2019
3-	Gamila S. Al-Ganainy*, Mona S. Talaat Hadeer I. Mohamed, Aya B. Ahmed Supported by Ain Shams University 2015	Preparation of new magnesium alloys for industrial and medical applications.	2018
4-	Adele Carrado*, Wafaa I. Abdel-Fattah, Hadeer I. Mohammed Supported by: PHC IMHOTEP 2011 (25639NH)	Compound Coatings of Ca- Phosphates and/ Titania on Metallic Implants.	2013

Current Research

#	Research Title	Name of Investigator(s)
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International Awards

#	Award	Organization	Date
	International fellowship for young women in Life Science	UNESCO-L'Oreal for women in science <ul style="list-style-type: none"> • https://case.ntu.edu.tw/blog/wp-content/uploads/2010/07/en_DP_2010.pdf • http://www.unesco.org/new/en/culture/themes/dynamic-content-single-view/news/loreal-unesco-awards-and-fellowships-for-women-in-science-2/ • https://en.wikipedia.org/wiki/L%27Or%C3%A9al-UNESCO_For_Women_in_Science_Awards#2010_Fellows 	2010

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
	The Third International Conference on Molecular Modelling and Spectroscopy	September 15 th -16 th , 2021, Cairo, Egypt	Oral Presentation
	THE 32 nd INTERNATIONAL CONFERENCE The Egyptian Materials Research Society (Eg-MRS)	January 6 th - 9 th , 2016, Aswan, Egypt	Poster
	The 6th International Conference on Optical Spectroscopy, Laser, and their applications.	April 7 th - 9 th , 2015 National Research Center, Giza, Egypt	Poster
	5 th IUPAP International conference on women in physics	August 5 th - 8 th , 2014, Waterloo, Canada	Poster
	11 th International school and workshop of crystallography on macro-molecular structure of biological and non-biological materials.	November 18 th - 22 nd , 2012, Hurghada, RedSea, Egypt	Attendance
	Symposium Coatings for Structural, Biological, and Electronic Applications II, TMS Annual Meeting & Exhibition	February 27 th - March 3 rd , 2011, San Diego, CA, USA.	Attendance
	1st Alexandria international congress on tissue engineering	February 13 th -16 th , 2009, Alexandria, Egypt.	Attendance



Membership of Scientific and Professional Societies and Organizations

- Member of Women in Physics Committee in Egypt
- Member of National committee of Biophysics- Egypt
- Member of Nakaa Nanotechnology Network NNN- Egypt

Contribution to scientific journals

#	Journal	Contribution
	Mathews Journal of Orthopedics	Editorial Board member

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1-	Electronics and Instrumentation for Electroneurophysiology	NEURT 201	3 Credit hours/ week: (15 Lectures and 15 Labs)
2-	Physics for Anesthesia	ANES 224	3 Credit hours/ week: (15 Lectures and 15 Labs)
3-	Biological physics		1 credit hours/week (15 Lectures)
4-	Research Methodology and Applied Statistics	NEURT 406	3 credit hours/week (15 Lectures)
4-	Substantial Biomaterials		3 Credit hours/ week: (15 Lectures and 15 Labs)
5-	Biophysics of Cell Membrane		2 Credit hours/ week: (15 Lectures)
6-	Introduction to biophysics		2 Credit hours/ week: (15 Lectures)

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

Electronics and Instrumentations for Electroneurophysiology (NEURT 201):

This course provides students with an overview of electronics and instrumentation as it applies to the field of clinical neurophysiology. A study of the fundamentals of direct current (Ohm's law, Kirchhoff's laws and circuit analysis techniques) and the fundamentals of alternating current (including series and parallel AC circuits, phasors, capacitive and



inductive networks, and transformers). The principles of signals recording, processing, filtering and amplification will be also discussed.

Physics for Anesthesia (ANES 224):

The course includes the basic principles of physics and its clinical applications to allow the anesthesia technologist to practice a safe and reliable anesthesia. These foundations explain such actions as pressure, flow, heat, waves, radiation, and other processes that are intimately intertwined with the delivery of anesthetics. Measurement is an integral part of this course as it describes the basic principles of the monitoring equipment that play an important part of clinical anesthetic practice. Some hazards cause in the operating room environment will be discussed.

Postgraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
	Biomaterials and Protheses		3 Credit hours/ week: (15 Lectures)

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

Course Coordination

#	Course Title and Code	Coordinatio n	Co- coordin ation	Undergr ad.	Postgrad.	From	To
1-	Electronics and Instrumentation for Electroneurophysiology (NEURT 201)	√		√		Sep. 2017	To date
2	Physics for Anesthesia (ANES 224)	√		√		Sep. 2017	To date
3	Biological physics		√	√		Feb. 2017	June 2017



Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
	Level 5	20	Sep.2019	June 2021
	Level 6	20		
	Level 7	20		
	Level 8	20		
	Level 3	24	Sep. 2021	June 2023
	Level 4	24		
	Level 5	24		
	Level 6	24		
	Level 7	24		
	Level 8	24		

Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
	Master	Evaluation of chitin extracted from different sources and some biological applications to its derivatives	Zoology Department- Faculty of Science- Ain Shams University, Cairo, Egypt	Awarded 2018
	Master	Processing and characterization of Nano Hydroxyapatite from Biowastes as a fertilizer for wheat and soybean	Physics Department- Faculty of Science- Ain Shams University, Cairo, Egypt	Awarded 2019
	Master	Synthesis and Characterization of Graphene –TiO ₂ Composites for Medical Application.	Physics Department- Faculty of Science- Ain Shams University, Cairo, Egypt	Awarded 2019
	Master	Cytotoxic effect of plant extracted CuO nanoparticles on human hepatocarcinoma cells	Physics Department- Faculty of Science- Ain Shams University, Cairo, Egypt	Awarded 2021

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

Administrative Responsibilities

#	From	To	Position	Organization
1-	Dec.2022	To date	Quality Coordinator of Neuroscience Technology Program	College of Applied Medical Sciences-Jubail
2-	11-5-1443	To date	Head of the scientific unit	College of Applied Medical Sciences-Jubail



Committee Membership

#	From	To	Position	Organization
1	2021	To date	Member of Strategic plan committee	College of Applied Medical Sciences-Jubail
2	2021	Dec.2022	Member of NS Quality Standing Committee	College of Applied Medical Sciences-Jubail
3	2021	2023	Research Groups Coordinator in the Scientific Research Unit	College of Applied Medical Sciences-Jubail
4	2021	To date	Member of the Neuroscience department's academic accreditation committee	College of Applied Medical Sciences-Jubail
5	2019	To date	Member of Academic Affairs Committee	College of Applied Medical Sciences-Jubail
6	2019	2022	Member of Security and Safety Committee	College of Applied Medical Sciences-Jubail
7	2017	2022	Member for "Establishment of specialized laboratories Committee"	College of Applied Medical Sciences-Jubail

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

1	Computer skills, MS-Office
2	Scientific Research, Team work and Communication Skills

Last Update

11/10/2022