

PhD in Medical Physics_UK

Dr Hadi Al-Sagur



Address: Al-Hadharat Complex, Al Shmoukh, Nasiriyah, 64001, Iraq

Email: hadi@utq.edu.iq

hadialsagur@gmail.com

Mobile: +9647801874561

WhatsApp: +9647801874561

https://www.researchgate.net/profile/Hadi_Al-Sagur3

Profile:

A lecturer teaches Medical Physics module for freshmen level at the Physiology and Medical Physics department in College of Medicine, University of Thi-Qar.

My interests of research are to focus on developing novel biosensors (enzymatic and non-enzymatic) for medical purposes, for instance, glucose biosensors for diabetes and drug discovery biosensor for doping in sport to measure low concentrations of some substances, which are placed on the International Olympic Committee's list of banned substances such as Erythropoietin and Testosterones.

Employing the nanostructured materials is one of the main cores in my work in order to produce multifunctional sensing platforms. Graphene derivatives and Silica nanoparticles have utilized in our project and showed significant properties at developing the performance of the fabricated biosensors. In addition, hydrogel based polymer is used as a host matrix for either the enzymatic or non-enzymatic nanostructured based biosensors.

Reading, socialising, travelling, fitness, basketball, football, hiking, cycling, running, swimming, rafting, volunteering, and hanging out with friends are interests and activities I like to do.

Work Experience

- Assistant of the director of Medical Physics Department since 11/6/2019 until now.
- I have been working for three years in laboratory on developing Electrochemical Biosensors based nanostructured materials at the Materials & Engineering Research Institute (MERI), Sheffield Hallam University in the United Kingdom from August 2015 to October 2018.
- I've worked as an ambassador of the International Experience Team (IET) in Sheffield Hallam University in the United Kingdom from September 2015 to November 2018. This was a part-time job focusing on supporting the new comers to the university through airport

pickup, trip guiding, university tours and so on. I've got Hallam Award of class 2018 after the three years' experience work.

- I've involved in a multicultural programme called Culture Connect and I worked as a Supermentor to supervise 20 new international students every semester from September 2015 to November 2018. I shared with them my culture and experience in my university-life in Iraq, UK, and USA.
- Speaker volunteer with a charity called Diabetes UK was very interesting job I've done during my PhD studies due to its relationship to my PhD research and it was off-campus work from August 2015 to November 2018.
- Supporting several charities via organising some activities at some churches. In addition to participating in several marathons to support different categories of people in Melbourne Florida, USA between November 2013 until February 2015.
- I have worked as a representative of Iraqi PhDs and applicants to South Carolina University. My role was to reduce the gap between the students, the university, and the Iraqi Cultural Attaché in Washington and to develop the relationship among them which had helped the students in different ways between October 2012 and October 2013.
- I have worked as volunteer for one year (October 2012 to October 2013) with several charities in Columbia, South Carolina, USA.
- I worked as lecturer and was responsible for teaching up to 55 freshmen at medical physics department, Collage of Medicine, University of Thi-Qar University, Nasiriyah city, south of Iraq between September 2009- October 2012. I sat up twelve experiments for medical physics laboratory through collaboration with Aldaleel scientific centre in Baghdad-Iraq. Also our team revised the guide of the experiments that students use in the lab.
- I was selected to supervising three nurses who were investigating the developing of health care in the country-side. Our job was to submit weekly report regards the health of young ladies in the rural life at Suq Ash Shuyukh city, Nasiriyah, Iraq. This was under a program funded by the WHO between 2005 to 2006.
- I worked as a physicist assistant in the lap of medical physics department for teaching up to 30 freshmen at the College of Medicine, University of Thi-Qar, Nasiriyah, Iraq from 15/7/2004 to 18/11/2006.
- I have worked as an assistant administrative at students' dorm in Al- Mustansiriyah University, Baghdad, Iraq from November 2003 to July 2004. I was responsible for providing support to the new students in the dorm. My job basically as supervisor on a

building contains of 20 rooms. Reporting issues was one of the main tasks I do in order to protect the furniture or other facilities.

Education:

- **PhD** in Medical Physics degree from the Materials and Engineering Research Institute, Sheffield Hallam University, **United Kingdom, 15 October 2018**. MERI is a dynamic interdisciplinary research institute dedicated to addressing industrial problems through the application of fundamental science and engineering. Publishing research is my passionate to develop my career and so far I have several journal papers.
- **M.Sc.** in Laser physics from Al-Mustansiriya University, Baghdad, **Iraq in April 2009**.
- **B.Sc.** in physics from Al-Mustansiriya University, Baghdad, **Iraq in August 2003**.

List of publications

- Biosensors and Bioelectronics Journal:
*Al-Sagur, H., Komathi Shanmuga sundaram, *, E.N. Kaya, Durmuş, M., Basova, T.V., Hassan, A.K. "Amperometric glucose biosensing performance of a novel graphene nanoplatelets-iron phthalocyanine incorporated conducting hydrogel" Biosensors and Bioelectronics 139 (2019) 111323*
- Biosensors and Bioelectronics Journal:
Al-Sagur, H., Komathi, S., Karakaş, H., Atilla, D., Gürek, A.G., Basova,T., Farmilo, N., Hassan, A.K. "A glucose biosensor based on novel Lutetium bis-phthalocyanine incorporated silica-polyaniline conducting nanobeads." Biosensors and Bioelectronics 102(2018)637-645.
- Sensors and Actuators B: Chemical journal:
Ahmet Şenocak, CemGöl, Tamara V. Basova, ErhanDemirbaş, MahmutDurmuş, Hadi Al-Sagur, BurakKadem, Aseel Hassan. Preparation of single walled carbon nanotube-pyrene 3D hybrid nanomaterial and its sensor response to ammonia., 256 (2018) 853-860.
- Biosensors and Bioelectronics Journal:
Al-Sagur, H., Komathi, S., Khan, M. A., Gurek, A.G & Hassan, A. "A novel glucose sensor using lutetium phthalocyanine as redox mediator in reduced graphene oxide conducting polymer multifunctional hydrogel." Biosensors and Bioelectronics 92(2017)638-645.

- Iraqi Academic Scientific Journals, Journal of College of Education for Pure Science: *Sana ThamerKadhem,SaherMezehirMeteshar,Hadi Wali Saheb Al-Sagur. "Bloch correction at high velocity." Thi-Qar University, Iraq. ISSN:2073-6592, Vol.2 Issue 1, January (2012)249-267.* <http://www.iasj.net/iasj?func=issues&jId=187&uiLanguage=en>

Conferences:

- **Al-Sagur, H.**, Komathi, S., Nabok, A., & Hassan, A. Development of chemical/bio-sensors using Graphene-based materials. Winter poster event of MERI_BMRC conference, (17th December 2015), Sheffield Hallam University, UK. (Poster)
- **Al-Sagur, H.**, Komathi, S. & Hassan, A. Preparation of polyaniline/Europium phthalocyanine janus nanocomposite electrochemical probe for reagentless detection of glucose. The Nanoparticles with Morphological and Functional Anisotropy: Faraday Discussion, (4th-6th July 2015) in the University of Strathclyde, Glasgow, UK. (Poster)
- **Al-Sagur, H.**, Komathi, S., Nabok, A., & Hassan, A. Development of chemical/bio-sensors using Graphene-based composites. MERI research Symposium, (17th-18th May 2016), Sheffield Hallam University, UK. (Poster)
- **Al-Sagur, H.**, Komathi, S., Khan, M. A., Gurek, A.G & Hassan, A. A novel glucose sensor using lutetium phthalocyanine as redox mediator in reduced graphene oxide conducting polymer multifunctional hydrogel. The 26th Anniversary World Congress on Biosensors, (25th-27th May 2016) Gothenburg, Sweden. (Poster)
- **Al-Sagur, H.**, Komathi, S., & Hassan, A. Lutetium phthalocyanine doped silica-polyaniline "bead-on-bead" nanostructures: A novel electrochemical probe for glucose biosensor application. Winter poster event of BMRC/MERI conference, (15th December 2016), Sheffield Hallam University, UK. (Poster)
- **Al-Sagur, H.**, Komathi, & Hassan, A. A glucose biosensor based on novel Lutetium bis-phthalocyanine incorporated silica-polyaniline conducting nanobeads . The 5th International Conference on Bio-Technology, (7th-10th May 2017) Riva Del Garda, Italy. (Poster)
- **Al-Sagur, H.**, Komathi, Nabok, A. & Hassan, Development of biosensors using graphene-based composites. MERI research Symposium (7th-10th May 2017) Sheffield Hallam University, UK. (Poster)

- **Al-Sagur, H.**, Komathi, S., & Hassan, A. The 60th anniversary of the Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia. (15th-22nd October 2017) (Collaboration and training course)
- **Al-Sagur, H.**, Komathi, S., Khan, M. A., Gurek, A.G & Hassan, A. A novel glucose sensor using lutetium phthalocyanine as redox mediator in reduced graphene oxide conducting polymer multifunctional hydrogel. The 10th Man Met Postgraduate Research Conference ‘PROVOKING DISCOURSE’ (7th March 2018), Manchester, UK. (Poster)
- **Al-Sagur, H.**, Komathi, S., & Hassan, A. A novel water soluble iron phthalocyanine as a redox mediator integrated to multifunctional hydrogel based graphene nanoplatelets for glucose monitoring. Deutsche Physikalische Gesellschaft e.V., (11th-16th March 2018), Berlin, Germany. (Poster)
- **Al-Sagur, H.**, Komathi, S., & Hassan, A. Construction and glucose biosensing performance of a water processable iron phthalocyanine functionalised graphene nanoplatelets distributed conducting hydrogel. The 28th Anniversary World Congress on Biosensors (12th-15th June 2018) Miami, Florida, USA. (Poster)
- **Al-Sagur, H.** Operation, maintenance, and responsibility of using biological cabinet. Raising Biorisk Management Awareness Event, sponsored by **Sandia** International Laboratories and Biological Threat Reduction Program (BTRP) (4th-6th March 2019) Baghdad, Iraq. (Presentation). The event was supported by the United States department of State and the American Embassy in Baghdad.
- **Al-Sagur, H.** Participation. The First International Scientific Conference, Al-Ayen University (30th – 31st March 2019), Nasiriyah, Iraq. (Visitor)
- **Al-Sagur, H.** Applying the nanotechnology through using *silica nanoparticles* to develop new glucose biosensor for diabetes mellitus. The 14th International Conference of College of Medicine, Al-Mustansiriyah University (7th – 8th April 2019), Baghdad, Iraq. (Presentation)

Prizes and awards:

- Best third poster in BMRC/MERI winter poster event, (15th December 2016), Sheffield Hallam University, UK.
- Sponsor award from the representative of the research sponsor, the Iraqi Cultural Attaché in London (17th January 2017).
- Best third PhD student talk at the MERI symposium, (17th May 2017), Sheffield Hallam University, UK.

Achievements:

- Two commendation letter from the minister of higher education and scientific research for my role as a director of the procurement committee. I worked in this committee for two years in order purchase the furniture and lab equipment to the new building of our college, Collage of Medicine and that was beside my job as a lecturer in the college.
- Four commendation letter from university president for setting up our new lab, Medical Physics Laboratory in collage of medicine – Thi-Qar University, Nasiriyah city, south of Iraq.
- One commendation letter from the dean of College of Medicine.

Addition Training:

- I've attended an advance course for developing the laboratory skills management besides reducing the risk factors around labs workers and that was through the international team of Sandia National Laboratories who are based on the United States Department of State. They are also supported by the International Biological and Chemical Threats Reduction (IBCTR). This training session was held in Edinburgh _UK on October 2018.
- Sandia National Laboratories and the Biological Threat Reduction Program (BTRP) managed a conference in the American Embassy in Baghdad between 4th to 6th March 2019. I presented a lecture and also took the workshop session.
- Several courses in developing time and management skills were been taken in Sheffield Hallam University between 2015 and 2018.
- Certificate of completion a pre-sessional English course from 3th August to 11th September 2015 at TESOL centre in Sheffield Hallam University, Sheffield City, UK.
- Certificate of completion level 112 in the Intensive Program- English of Academic Purposes was taken at ELS language Centre in December 20th, 2013 at Melbourne, Florida State, USA.
- Multicultural course at the Baptist Collegiate Ministry (BCM) at 2013 in South Carolina State, USA.
- Certificate of completion full course in the English Program for International (EPI) in November 2013 at South Carolina University, South Carolina State, USA.
- Completing a Human Right advanced course and achieving merit certificate in 2011 was from the presidency of Thi-Qar University, Nasiriyah, Iraq.
- Completing a Human Right course and achieving merit certificate 2010 was from College of Arts, University of Thi-Qar, Nasiriyah, Iraq.