

CV

Name: Abeer Furaihan Alshammari
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Education:

2010-2015 Doctor of Philosophy (PhD) in physics, Nano-electronics
Bath university, UK

Thesis title : A biosensing platform based on graphene and supramolecular protein complexes.

2004-2008 Master of Science (Msc) in physics, solid state physics
King Saud university, KSA.

Thesis title: Effect of sintering aids (AST) on the microstructure and the electrical properties of n-type BaTiO₃ semiconductors.

1998-2002 Bachelor of Science (BSc) in physics.
King Saud university.

Teaching/Administrative experience

2017-2019 : Vice head department –Physics department

2015- Present : Assistant professor

2005-2015 : Assistant –physics department, King Saud University

Committee and activities

- Cooperative training unit in science college.
- Development & Quality Committee
- PG and Scientific research committee.
- Alumni and human resources committee.
- E-learning committee.
- Lab teaching and equipment committee.
- Strategic plan committee.

List of publications

- 1- Quality Factor of a Microchannel Microresonator as a Function of Viscosity and its Vibrational Mode: An Experimental and Computational Analysis.**

Abeer Alshammri, Reem Alsaigh, Khalid E. Alzahrani, Abdulaziz K. Assaifan, Hamad Albrithen, Mona Braim, Saravanan Pandiaraj , Asokan Vimala Juliet, Ganesan Sanchana,

Muthumareeswaran Muthuramamoorthy, Abdullah Alodhayb. *IEEE Sensors Journal*.23,1. JANUARY 1, 2023.

2- Probing the Influence of Crosslinking Layer Incubation Time on the Performance of Non-Faradaic Impedimetric Biosensors.

Abdulaziz K. Assaifan, z Abdulrahman S. Aljdidalmri, Hamad Albrithen, Abdullah Alodhayb, Khalid E. Alzahrani, Abeer Alshammari, Mahmoud A. Al-Gawati, and Saleh Husam Aldeligan. *J. Electrochem. Soc.* **169** 117511. 23NOV2022.

3- Mixed perovskite (MAPbI₃-xCl_x) solar cells using light-emitting conjugated polymer DMP end-capped MDMO-PPV as a hole transport material

Saradh Prasad, Mamduh J.Aljaafreh, Abeer Alshammari, Mona A.S.Almutairi, Jagannathan Madhavan, Mohamad S.Alsalhi. *Journal of King Saud University – Science*, Volume 34, Issue 7, October 2022, 102262. Elsevier.

4- Utilizing photothermally induced oscillation damping parameters for the determination of bacterial load suspended in microfluidic resonators

Hamad Albrithen , Khalid E. Alzahrani , Abdulaziz K. Assaifan , Mona Braim , Abeer Alshammari a, Abdullah Alodhayb. *Journal of King Saud University – Science*, 15 May2022, Elsevier.

5- Nanomechanical Detection of Bacteria–Bacteriophage Interactions Using Microchannel Microcantilevers

Khalid E. Alzahrani, Abdullah Alodhayb, Mahmoud Algwati, Amal F. Alanazi, Qura Tul Ain, Abdulaziz K. Assaifan, Salim Manoharadas, Abeer Alshammari, Abdullah Alswieleh, and Hamad Albrithen, *Journal of The Electrochemical Society*, 2021, 168 087509

6- Encapsulated Passivation of Perovskite Quantum Dot (CsPbBr₃) Using a Hot-Melt Adhesive (EVA-TPR) for Enhanced Optical Stability and Efficiency

Saradh Prasad, Mamduh Aljaafreh, M. S. AlSalhi *, Abeer Alshammari, *Crystals*, 11(4), 419, 13 April 2021.

7- Investigation of magnesium addition in ZnO matrix using group II heptahydrate

Hadba Hussain, Abeer Alshammari; Ahmed Alyamani; Ali Alanzi; Baderah Awad Almutairy; Hamad A. Albrithen; Nargis Bano; Sarah Nasser Alyemni; Shareefah Ayed AlAhmary *MATERIALS RESEARCH EXPRESS*,8(4),Apr 2021.

8- Detection of Chemical Host–Guest Interactions Using a Quartz Tuning Fork Sensing System

Abeer Alshammri, Fadwa Aldosari, Najd Bin Qarmalah, Ahoud Lsloum, Muthumareeswaran Muthuramamoorthy, Abdullah Alodhayb. *IEEE sensors journal*, **Volume: 20, Issue: 21**, NOVEMBER 1, 2020.

9- The systemic effect of PEG-nGO-induced oxidative stress in vivo in a rodent model

Qura Tul Ain, Samina Hyder Haq , Abeer Alshammari , Moudhi Abdullah Al-Mutlaq and Muhammad Naeem Anjum, *Beilstein J. Nanotechnol.* 2019, 10, 901–911.

10- Dose-dependent cytotoxicity of polyethylene glycol loaded nano-graphene oxide in cultured cerebral cortical cells.

Qura Tul Ain, Samina Hyder Haq, Abeer Al-Modlej, Abeer Alshammari, Shahzad Ahmed and Muhammad Naeem Anjum, August 2019, *Materials Research Express*, Volume 6, Number 10

11- Study of a saturation point to establish the doping density limit of silicon with graphene oxide.

Qura Tul Ain, N. Bano, Abeer Al-Modlej, Abeer Alshammari, I. Hussain, Muhammad Naeem Anjum. *Materials Science in Semiconductor Processing*, 96, 2019, 116-121.

12- Effect of solvents on optical band gap of silicon-doped graphene oxide.

Anjum, Qura Tul Ain, Abeer Al-Modlej, Abeer Alshammari and Muhammad Naeem. 2018 IOP Publishing Ltd, *Materials Research Express*, Volume 5, Number 3

13- Enhancement of external quantum efficiency and quality of heterojunction white LEDs by varying the size of ZnO nanorods

N Bano, I Hussain, S Sawaf, Abeer Alshammari and F Saleemi
Published 25 May 2017 • © 2017 IOP Publishing Ltd, *Nanotechnology*, Volume 28, Number 24

14- A Modular Bioplatfrom Based on a Versatile Supramolecular Multienzyme Complex Directly Attached to Graphene.

Abeer Alshammari, Mareike G. Posner, Abhishek Upadhyay, Frank Marken, Stefan Bagby, and Adelina Ilie. *ACS Appl. Mater. Interfaces*, 2016, 8 (32), pp 21077–21088

Conferences

- GW4 Biosensors Workshop 2017, 18 Jan, Bristol, UK.

“A modular sensor platform based on a versatile supramolecular multi-enzyme complex directly attached to graphene”

Abeer Alshammari, Mareike Posner, Abhishek Upadhyay, Mohsina Bashir, Frank Marken, Stefan Bagby, Adelina Ilie

-Trends in Nanotechnology 2012, September 2012, Madrid (Spain)

“Non-Covalent Biofunctionalization of Graphene with Cage-like Multi-Enzyme Complexes for Sensing”,

Abeer Al-Shammari, M.G. Posner, A. Upadhyay, F. Marken, S. Bagby, and A. Ilie

-Great Western Electrochemistry Meeting, 18 June 2012, University of Bath

“Immobilization and activity retention of supramolecular protein complexes on graphene sensing platforms”,

A. Alshammari, M. Posner, A. Upadhyay, F. Marken, S. Bagby, and A. Ilie

Electrochemical Horizons 2011, September 2011, Bath

“Graphene-based amperometric and field-effect biosensing with supramolecular protein complexes”,

A. Al-Shammari, M. Posner, G.J. Jones, A. Upadhyay, S. Bagby, P. Estrela, and A. Ilie

-IOP 2011 – Graphene and other 2D systems, 1-2 June 2011, London

“Immobilization and activity retention of supramolecular protein complexes on graphene sensing platforms”,

A. Al-Shammari, M. Posner, G.J. Jones, A. Upadhyay, S. Bagby, P. Estrela, and A. Ilie

-ImagineNANO + Graphene 2011 combined conference 11-14 April, 2011, Bilbao, Spain

“Immobilization of E2 protein and its supramolecular complexes, and activity retention on graphene”,

A. Al-Shammari, M. Posner, G. Jones, A. Upadhyay, S. Bagby, P. Estrela, and A. Ilie

Thesis supervision:

- 1- Synthesis and Characterization of vertically aligned graphene deposited on dielectric substrate, MSc thesis, Wafa Alrekabi
- 2- Correlation of Synthesis Condition with The Structural and Optical Properties of ZrO₂ Doped TiO₂ Nanoparticles Prepared By The SolGel Method, MSc thesis, Sarah Alyamni
- 3- Structural and Optical Properties of ZnO Nanoparticles Doped by Mg Prepared by Solgel method, MSc thesis, Hadbaa Alqahtani.
- 4- An Ultrasensitive and Rapid Detection of Analyte in Aqueous Solutions Using GoldCoated QTFs, MSc thesis, Ohood Alsloom.
- 5- Discrimination of Different Blood Plasma Samples Using mechanically based resonators: towards early prediction of blood clots. MSc thesis, Wejdan Khan.
- 6- Formation of Thiol Self-assembly Monolayer on Various gold Surfaces: Modeling and characterization, MSc thesis, Ghadeer Sallal.