Curriculum Vitae

Dr. Sabah M. Mohammad

Ph.D, School of Physics, University Science Malaysia (USM), Penang, Malaysia

Cell No.: (+601-47256871)

or (+601-131875043)

Personal Information

Name:	**Sabah M. Mohammad**
Sex:	Male
Nationality:	Iraqi
Religion:	Muslim
Date of Birth:	09.08.1968
Language Known:	Arabic, English, Turkish, and Kurdish
Affiliation:	School of Physics / University Science Malaysia (USM)/ Penang /11800 /Malaysia
Hand Phone:	**+601-47256871**
Email:	**Sabahaskari14@gmail.com** **Kezrabat@yahoo.com**
Google Scholar:	Sabah M. Mohammad
Web:	**https://scholar.google.com/citations?user=7JLwuLsAAAAJ&hl=en**
ResearchGate:	Sabah M. Mohammad
Web:	**https://www.researchgate.net/profile/Sabah_Mohammad**

Education

Ph.D **University Science Malaysia (USM), Malaysia.** **(2017)**
Field: Semiconductor Fabrication (Thin Film, Epitaxy and Nano-structures)
(Applied and Engineering Physics)
Title of thesis: Growth of ZnO Nanorods Using Hydrothermal and Modified Chemical Bath Deposition for Device Applications.

Master **University Science Malaysia (USM), Malaysia.** **(2013)**
Programme Mode: coursework
Master of Physics-solid state
Title of project: Metal Semiconductor Metal Photo detector
Grade: 3.10

Bachelor **Salahaddin University, Iraq.** **(1991)**
Bachelor Degree of Science (Physics
Ranked as the 9th top student out of 60.

Work Experience

2013-Present **Researcher** **University Science Malaysia (USM)**

- Graduate research assistant (GRA) attached to the school of physics/USM/ Pinang/Malaysia.
- Collaborate and research with IQ-group for LEDs, Pinang, Malaysia.

2004-2010 **Teacher of physics** **Dubai-UAE**

- Supervisor of Science department and Teacher of physics in many high school; Dubai Modern Education School, Dubai National School, International Academy School.
- Trainer for (ICDL) in Alkham'l Centre for international computer license- Ministry of Education- UAE.

2000-2003 **Teacher of physics and math** **Jordan**

- Teacher of physics in many high school.
- Teacher of physics and math in private institutes.

1993-1999 **Researcher Atomic Energy Commission** **Iraq**

- Department head of research group for elector-glass department.
- Researcher of different applied physics fields.

Career Objective

- To get a position of a researcher or lecturer in which I can put all my skills and knowledge and professional experience in the field of modern solid state physics and nanotechnology, and the development of creative abilities and skills of students, with continue to publish scientific papers.

List of Publications

Note: All articles are available at:

Google scholar: **Sabah M. Mohammad**
Web: **https://scholar.google.com/citations?user=7JLwuLsAAAAJ&hl=en**
ResearchGate: **Sabah M. Mohammad**
Web: **https://www.researchgate.net/profile/Sabah_Mohammad**

i. Patent

1. Malaysian Patent Application No. PI 2016702309 (Approved)

Title: ***Direct heat substrate-modified chemical bath deposition system for growth of ultralong zinc oxide (ZnO) Nanorods and process for fabrication of a nano-size junction LED***.

Applicant: Universiti Sains Malaysia
Our Ref: 10145P027/DYP/JC/ss
Your Ref: 15043.
Available at: **http://ipjournal.myipo.gov.my/ipjournal/index.cfm**

ii. Journals

1. **Sabah M. Mohammad**, Z Hassan, Naser M. Ahmed, N.H. Al-Hardan, and M. Bououdina "*Fabrication of low cost UV photo detector using ZnO nanorods grown onto nylon substrate*." Journal of Materials Science: Materials in Electronics 26.3 (2015):1322-1331. DOI: 10.1007/s10854-014-2542-6 [ISI], [IF= 1.798].

2. **Sabah M. Mohammad,** Z Hassan, Rawnaq A. Talib, Naser M. Ahmed, Mohammed A. Al-Azawi, Nabeel M. Abd-Alghafour, and C.W. Chin, N.H. Al-Hardan. "*Fabrication of a highly flexible low-cost H_2 gas sensor using ZnO nanorods grown on an ultra-thin nylon substrate."* Journal of Materials Science: Materials in Electronics: (2016) (Vol 27, issu 9). DOI: 10.1007/s10854-016-4993-4 [ISI], [IF= 1.798].

3. **Sabah M. Mohammad**, Z Hassan, Naser M. Ahmed, Rawnaq A. Talib, Nabeel M. Abd-Alghafour, and A. F. Omar: *"Hydrothermal growth and characterization of vertically well-aligned and dense ZnO nanorods on glass and silicon using a simple optimizer system".* AIP Conf. Proc, Volume 1733, Issue 1, id.020032. (2016), DOI: 10.1063/1.4948850. [Scopus and ISI Index].

4. Mohammed A. Al-Azawi, Noriah Bidin, M. Bououdina, and **Sabah M. Mohammad.** "*Preparation of gold and gold–silver alloy nanoparticles for enhancement of plasmonic dye-sensitized solar cells performance*" Solar Energy 126" (2016): 93-104. DOI: http://doi.org/10.1016/j.solener.2015.12.043 [ISI], [IF= 3.685].

5. M. Z. Mohd Yusoff, A. Mahyuddin, Z Hassan, H. Abu Hassan, M. J. Abdullah, M.Rusop, **S. M. Mohammad**, and Naser M. Ahmed."*AlN/GaN/AlN heterostructures grown on Si substrate by plasma-assisted MBE for MSM UV photodetector applications*". Materials Science in Semiconductor Processing 29 (2015): 231-237. DOI: http://doi.org/10.1016/j.mssp.2014.03.041[ISI], [IF= 2.264].

6. Naif H. Al-Hardan, Muhammad Azmi Abdul Hamid, Naser M. Ahmed, Azman Jalar, Roslinda Shamsudin, Norinsan Kamil Othman, Lim Kar Keng, **Sabah M. Mohammed.** "*A study on the uv photoresponse of hydrothermally grown zinc oxide nanorods with different aspect ratios.*" IEEE Sensors Journal 15.12 (2015): 6811-6818. DOI: 10.1109/JSEN.2015.2464311 [ISI], [IF= 1.889].

7. Rawnaq A. Talib, M.J. Abdullah, **Sabah M. Mohammad,** Naser M. Ahmed, Nageh K. Allam *"ZnO nanorods/polyaniline-based inorganic/organic heterojunctions for enhanced light sensing applications."* ECS Journal of Solid State Science and Technology 5.3 (2016): P142-P147. DOI: 10.1149/2.0031603jss [ISI], [IF= 1.744].

8. Rawnaq A. Talib, M.J. Abdullah**, Sabah M. Mohammad**, Naser M. Ahmed, Nageh K Allam". *Efect of substrate on the photodetection characteristics of ZnO-PANI composites".* ECS Journal of Solid State Science and Technology 5.6 (2016): P305-P308. DOI: 10.1007/s10854-014-2542-6 [ISI], [IF= 1.650].

9. Rawnaq A. Talib, M.J. Abdullah, Husam S. Al-Salman, **Sabah M. Mohammad**, and Nageh K Allam "*ZnO nanorods/polyaniline heterojunctions for low-power flexible light sensors.*" Materials Chemistry and Physics 181 (2016): 7-11. DOI: http://doi.org/10.1016/j.matchemphys.2016.06.061 [ISI], [IF= 2.101].

10. Rawnaq A. Talib, M.J. Abdullah, Husam S. Al-Salman, **Sabah M. Mohammad**, N. M. Ahmed, and M. Bououdina. "*Effect of growth time on structure, optical and photo-response characteristics of ZnO nanorods deposited onto various substrates*." Journal of Ovonic Research Vol 12.3 (2016): 171-184[ISI], [IF= 0.692].

11. N.M. Abd-Alghafour, Naser M. Ahmed, Z Hassan, **Sabah M. Mohammad**, and M. Bououdina, M.K.M. Ali "*Characterization of V2O5 nanorods grown by spray pyrolysis technique.*" Journal of Materials Science: Materials in Electronics 27.5 (2016): 4613-4621. DOI: 10.1007/s10854-016-4338-3 [ISI], [IF= 1.798].

12. Rawnaq A. Talib, M.J. Abdullah, Naser M Ahmed, **Sabah M. Mohammad,** and M. Bououdina. "*UV sensing of twinned ZnO–PANI composite*". Applied Physics A 122.5 (2016): 1-9. DOI: 10.1007/s00339-016-0060-5 [ISI], [IF= 1.444].

13. N.M. Abd-Alghafour, Naser Ahmed, Z Hassan, **Sabah M. Mohammad**, M. Bououdina, and M.K. M. Ali. "*Structural, morphological and optical properties of V2O5 nanorods grown using spray pyrolysis technique at different substrate temperature.*" Nanoscience and Nanotechnology Letters 8.2 (2016): 181-186. DOI: https://doi.org/10.1166/nnl.2016.2062 [ISI], [IF= 1.007].

14. Rawnaq A. Talib, M. J. Abdullah, and **Sabah M. Mohammad**. "*Formation and analysis of ZnO-PAni hexagonal prisms composite prepared by chemical method*." AIP Conf. Proc Publishing, 2016. (IC-NET 2015). Vol. 1733. No. 1. DOI: http://dx.doi.org/10.1063/1.4948849 [Scopus and ISI Index].

15. N. M. Abd-Alghafour, Naser M. Ahmed, Zai Hassan, **Sabah M. Mohammad**, and M. Bououdina "*Growth and characterization of V2O5 nanorods deposited by spray pyrolysis at low temperatures*." AIP Conf. Proc Publishing, (IC-NET 2015). Vol. 1733. No. 1. DOI: http://dx.doi.org/10.1063/1.4948844 [Scopus and ISI Index].

16. N. M. Abd–Alghafour, Naser M. Ahmed, Zai Hassan, and **Sabah M. Mohammad**. "*Influence of solution deposition rate on properties of V2O5 thin films deposited by spray pyrolysis technique*." AIP Conf. Proc Publishing, 2016. (ICOFM 2016). Vol. 1756. No. 1. DOI: http://doi.org/10.1063/1.4958791 [Scopus and ISI Index].

iii. Conferences

1. **Sabah M. Mohammad,** Z Hassan, and Naser M. Ahmed: "Ultraviolet photodetector of vertically aligned zno nanorods synthesized using hydrothermal method on glass substrate". The Regional Fundamental Science Congress 2014, (FSC2014). University Putra Malaysia, 19-20/8/2014.

2. **Sabah M. Mohammad**, Z Hassan, Naser M. Ahmed, Rawnaq A. Talib, Nabeel M. Abd-Alghafour, and A. F. Omar: "Hydrothermal growth and characterization of vertically well-aligned and dense ZnO nanorods on glass and silicon using a simple

optimizer system". International Conference on Nano-Electronic Technology Devices and Materials 2015 (ic-net 2015). uitm shah alam, selangor, malaysia 27/2-2/3-2015.

3. **Sabah M. Mohammad**, Z. Hassan and Naser M. Ahmed."Growth of n- ZnO nanorods on p-GaN using an Aqueous Solution Method". 2rd Meeting of Malaysia Nitrides Research Group (MNRG 2015), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, 6-7/12/2015.

4. N. M. Abd-Alghafour, Naser M. Ahmed, Zai Hassan, **Sabah M. Mohammad**, M. Bououdina. "Growth and characterization of V2O5 nanorods deposited by spray pyrolysis at low temperatures." International Conference on Nano-Electronic Technology Devices and Materials 2015 (ic-net 2015), uitm shah alam, selangor, malaysia 27/2-2/3-2015.

5. **Sabah M. Mohammad,** Z. Hassan, Naser M. Ahmed, "Near ultra-violet electroluminescence from ZnO Nanorods/p-GaN heterojunction light-emitting diode, 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, 6-7/12/2016.

6. Rawnaq A. Talib, M. J. Abdullah, and **Sabah M. Mohammad**. "Formation and analysis of ZnO-PAni hexagonal prisms composite prepared by chemical method."Iinternational Conference on Nano-Electronic Technology Devices and Materials 2015 (IC-NET 2015),uitm shah alam, selangor, malaysia 27/2-2/3-2015.

7. N. M. Abd–Alghafour, Naser M. Ahmed, Zai Hassan, and **Sabah M. Mohammad**. "Influence of solution deposition rate on properties of V_2O_5 thin films deposited by spray pyrolysis technique." The 2nd International Conference on Functional Materials and Metallurgy (ICOFM 2016), park royal hotel and resort Penang, 28/5/2016.

Teaching Experience

- Solid state physics I, II
- Semiconductor Devices
- Modern physics
- Optics
- Mathematics I, II

Computers Technical Skills

- Experience in Microsoft office (Word, PowerPoint, Excel……).
- Experience in other software applications such as: Origen, Segma, Edward max, SketchUp, Viso and Nano-Scope Analysis.

Research Interests

- Solid State Physics, Nano-semiconductors
- Nano-technology.
- Light emitting diode (LEDs) devices.
- UV-light enhancement
- UV-VIS - PL spectroscopy.
- UV-VIS – detectors.
- Gas sensors.
- ZnO Nanorods.
- GaN material.
- Porous silicon and Porous GaN, and other materials.
- Photonic Materials and Devices

Functions

Member in

- Iraqi physical and mathematical union since 1993.
- ARID, Arab Research ID.