

CURRICULUM VITAE

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- **Name:** Muwaffaq Abdullah Abbas Al-Mossawi.
- **Degree:** Assist. Prof.
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- B. Sc. In Physics, University of Basrah, College of Education, 1995.
- M.Sc. , University of Baghdad- College of Science for Women, 2009, "A Study of Electronic and Optical Properties of ZnO-MgZnO Quantum-Dot Semiconductor Optical Amplifiers".
- Ph.D. , University of Baghdad- College of Science, 2015, Second Order Nonlinearity in Quantum-Dot Semiconductor Structures".

ACADEMIC EXPERIENCE

- Solid State experiment, physics Department, College science, University of Thi-Qar, [2002-2006].
- Logic experiment, physics Department, College science, University of Thi-Qar, [2002-2006].
- Electrical experiment, physics Department, College science, University of Thi-Qar, [2002-2006].
- Electronic experiment, physics Department, College science, University of Thi-Qar, [2002-2006].
- Modern Physics Theoretical, physics Department, College science, University of Thi-Qar, [2009 , 2010].
- Computer Theoretical, physics Department, College science, University of Thi-Qar, [2013 , 2014 and 2015].
- Material physics Theoretical, physics Department, College science, University of Thi-Qar, [2016-2021].
- Mathematics, physics Department, College science, University of Thi-Qar, [2019-2021].

WORK EXPERIENCE

- A paper titled "ZnO-MgZnO Quantum-Dot Semiconductor Optical Amplifiers ", accepted for publication in Journal. Recent Patents Electrical Engineering, Vol. 2, pp. 226-238, 2009.
- A paper titled "CdSe/ZnSe Quantum-Dot Semiconductor Optical Amplifiers" Insciences J. , 52-62, 2012.
- A paper titled "Second-order nonlinear susceptibility in quantum dot structure under applied electric field", Superlattices and Microstructures, Elsevier, 82 , 219-233, 2015.
- A paper titled " Terahertz emission in ladder plus Y-configurations in double quantum dot structure", Applied Optics, OSA, 54, 5186-5192, 2015.
- A paper titled " Millimeter waves from frequency generation and optical rectification in quantum dot structure" , Springer, Opt Quant Electron (2016) 48:15.
- A paper titled " Terahertz emission in quantum dots by sum frequency generation" , Elsevier ,Current Applied Physics 16 (2016) 763e771.
- A paper titled " ZnCdSe/ZnSe quantum-dot semiconductor optical amplifiers" , Elsevier , Superlattices and Microstructures, 407-416, 2017.
- A chapter 9 " Second-Order Nonlinear Susceptibility in Quantum Dot Structures" , Book , Semiconductor Nanocrystals and Metal Nanoparticles, 307-337, CRC Press, Taylor & Francis Group, 2016.
- A paper titled " Giant gain from spontaneously generated coherence in Y-type double quantum dot structure" , Elsevier , Result in Physics,7(2017) 2411-2416.
- A paper titled " Entanglement in ladder-plus-Y double quantum dot structure via entropy" Vol. 58, No. 2 / 10 January 2019 / Applied Optics.
- A paper titled " Lasting without population inversion in a four-level Y-type configuration in double quantum dot system" , Pramana , J. Phys., (2018)91:74.
- A paper titled " Comparison between GaN and InN quantum-dot semiconductor optical amplifiers" , Microw Opt Technol Lett. 2020;1–9.
- A paper titled " Quantum Entropy in Ladder-Plus-Y Double Quantum Dot System using Spontaneously Generated Coherence " , International Journal of Theoretical Physics, springer, 2020.
- A paper titled "Double quantum dot–metal nanoparticle systems under strong coupling" J. Appl. Phys. 132, 043102 (2022); <https://doi.org/10.1063/5.0098342>
- A paper titled "Optical susceptibility of metal nanoparticle-double quantum dot hybrid system" Current Applied Physics 42 (2022) 22–30.
- A paper titled "Energy absorbed from double quantum dot-metal nanoparticle hybrid system"

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- A paper titled “QDs of Wide Band Gap II–VI Semiconductors Luminescent Properties and Photodetector Applications” chapter 17, Handbook of II-VI Semiconductor-Based Sensors and Radiation Detectors, https://doi.org/10.1007/978-3-031-20510-1_17

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