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Al Muthanna University, Samawah, Iraq

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Academic Qualifications

2017 **PhD** Subject: **Nanotechnology - Physics**

Title: **Synthesis of Gamma and Theta Alumina Phases Complemented With First Principle Calculation**

Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, Skudai, Johor Bahru, Malaysia.

The PhD work was completed under the supervision of *Prof. Dr. Zulkafli Bin Othaman*, and *Prof. Dr. Mohammad Alam Saeed*

2010 **M Sc.** Subject: **Physics – Theoretical Physics**

Title: **Linear Optical and Four Wave Mixing Characteristics of Long Wavelength III-Nitride Quantum Dot Semiconductor Optical Amplifiers**

Department of Physics, Faculty of Science, University of Babylon, Iraq.

The M Sc. work was completed under the supervision of *Assist. Prof. Dr. Hameed I. Abood*, and *Prof. Dr. Amin H. Al-Khursan*

2005 **B Sc.** Subject: **Physics**

Title: **Solar Cell**

Department of Physics, Faculty of Science, Al- Muthanna University, Iraq.

The B Sc. work was completed under the supervision of *Assist. Prof. Dr. Abdul Ameer K. Farhood*

Research Publications

1. **Ahmed S. Jbara**, H. I. Abood, and Amin H. Al-Khursan, “Effect of doping and in-composition on gain of long wavelength III-nitride QDs”, *Journal of Optics*, Vol. 41, No. 4 (2012) 214-223.
DOI: <https://doi.org/10.1007/s12596-012-0085-x>
2. Amin H. Al-Khursana, **A. Subhi**, H.I. Abood, “Four-wave mixing in long wavelength III-nitride QD-SOAs”, *Optik*, Vol. 124, (2013) 4072– 4079.
DOI: <http://dx.doi.org/10.1016/j.ijleo.2012.12.061>
3. **Ahmed S. Jbara**, Zulkafli Othaman, and M A Saeed, "Effect of size and indium-composition on linear and nonlinear optical absorption of InGaN/GaN lens-shaped quantum dot", *Chin. Phys. B*, Vol. 25, No. 5 (2016) 057801.
DOI: <https://doi.org/10.1088/1674-1056/25/5/057801>

4. Shadab Dabagh, Ali Ati, S.K. Ghoshal, Samad Zare, R. M. Rosnan, **Ahmed S. Jbara**, Zulkafli Othaman, " Cu^{2+} and Al^{3+} co-substituted cobalt ferrite: Structural analysis, morphology and magnetic properties", *Bulletin of Materials Science*, Vol. 39, No. 4 (2016) 1029–1037.
DOI: <https://link.springer.com/article/10.1007%2Fs12034-016-1233-8>
5. **Ahmed S. Jbara**, Zulkafli Othaman, Ali A. Ati, and M. A. Saeed, "Characterization of gamma- Al_2O_3 nanopowders synthesized by co-precipitation method", *Materials Chemistry and Physics*, Vol. 188, (2016) 24-29.
DOI: <http://dx.doi.org/10.1016/j.matchemphys.2016.12.015>
6. **Ahmed S. Jbara**, Zulkafli Othaman, and M. A. Saeed, "Structural, morphological and optical investigations of θ - Al_2O_3 ultrafine powder", *Journal of Alloys and Compounds*, Vol. 718, (2017) 1-6.
DOI: <https://doi.org/10.1016/j.jallcom.2017.05.085>
7. **Ahmed S. Jbara**, Zulkafli Othaman, H. A. Rahnamaye Aliabad, and M. A. Saeed, "Electronic and Optical Properties of γ - and θ - Alumina by First Principle Calculations", *Advanced Science, Engineering and Medicine*, Vol. 9, No. 4 (2017) 287-293.
DOI: <https://doi.org/10.1166/ase.2017.2007>
8. **Ahmed S. Jbara**, Zulkafli Othaman, H. A. Rahnamaye Aliabad, and M. A. Saeed, "Investigated electronic and optical properties of γ - and θ - Al_2O_3 : First principles calculations", *Advanced Science Letters*, Vol. 24, No. 4 (2018) 3579-3581(3).
DOI: <https://doi.org/10.1166/asl.2018.11439>
9. **Ahmed S. Jbara**, M. A. Saeed, and Muhammad Umer Saleem, "Theoretical investigation of structural and electronic properties of $\text{BeS}_{1-x}\text{Se}_x$ alloys for optoelectronic applications", *Optik*, Vol. 179 (2019) 1118–1122.
DOI: <https://doi.org/10.1016/j.ijleo.2018.10.162>
10. **Ahmed S. Jbara**, Junaaid Munir, Bakhtiar Ul Haq, and M. A. Saeed, "Density functional theory study of mixed halide influence on structures and optoelectronic attributes of $\text{CsPb}(\text{I/Br})_3$ ", *Applied Optic*, Vol. 59, No. 12 (2020) 3751- 3759.
DOI: <https://doi.org/10.1364/AO.389100>
11. Bakhtiar Ul Haq, S AlFaify, **Ahmed S Jbara**, R Ahmed, Faheem K Butt, A Laref, Aijaz Rasool Chaudhry, Zulfiqar Ali Shah, "Optoelectronic properties of three PbSe polymorphs", *Ceramics International*, Vol. 46, No. 14 (2020) 22181-22188.
DOI: <https://doi.org/10.1016/j.ceramint.2020.05.295>

12. **Ahmed S. Jbara**, Zulkafli Othaman, H. A. Rahnamaye Aliabad, and M. A. Saeed, "Investigated electronic and optical properties of γ - and θ -Al₂O₃: First principles calculations", 2nd International Conference on Science, Engineering, and the Social Sciences (ICSESS 2016), 29th May - 1st June, 2016, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
13. **Ahmed S. Jbara**, and M. A. Saeed, "Theoretical investigation of structural and electronic properties of BeS_{1-x}Se_x alloys for optoelectronic applications", 6th International Conference on Education (ICE 2018): Science Beyond Class room, 15-17 March, 2018, University of Education, Lahore, Pakistan.
14. Iman A. Laim, **Ahmed S. Jbara**, and Hadey K. Mohamad, " Structural, and Electronic Properties of ZnX (X=S, Se, Te) By First-principles Calculation", 1st International Conference on Advanced Research in Pure and Applied Science (ICARPAS 2021): 24th-25th March 2021, College of Science, Al-Muthanna University, Samawah, Iraq.

Teaching Experience

Since last 11 years, I have been involved in teaching to undergraduate students with different subjects such as: Analytical Mechanics, Numerical Analysis, Statistical Mechanics, and Mathematical Physics at Department of Physics, Faculty of Science, Al Muthanna University, Iraq.

Research Interests

Semiconductor band structures, low-dimension physics, quantum dot devices

Collaboration and Membership

Center for Sustainable Nanomaterials, Universiti Teknologi Malaysia, Skudai-81310, Johor Bahru, Malaysia

Workshops/Conferences

a) Presented Papers at National and International Conferences.

1. National Conference of Physics (NCP), 7-8 November, 2012, University of Baghdad and Babylon, Babylon-Iraq.
2. 2nd International Conference on Science, Engineering, and the Social Sciences (ICSESS 2016), 29th May - 1st June, 2016, Universiti Teknologi Malaysia, Johor-Malaysia.
3. 6th International Conference on Education (ICE 2018): Science Beyond Class room 15-17 March 2018, University of Education, Lahore-Pakistan.

b) Attended International Workshops

1. Writing for Journal Workshop, 07/01/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
2. Science & Technology Track - Forum of Attending VIVA-VOCE, 28/01/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
3. Critical Literature Review Workshop, 30/01/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
4. Talk on Writing a PhD Thesis, 01/02/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.

5. How to write a great paper, and get it published in a research journal, 04/03/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
6. COMSOL Multiphysics Seminar and Workshop, 09-10/06/2014, University of Malaya, Kuala Lumpur, Malaysia.
7. COMSOL Multiphysics workshop, 12/03/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
8. Material Characterization by Thermal and Chemical Analysis, 24/08/2015, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.
9. Training of SEM-EDS, 06/04/2016, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.

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Website: <http://profiles.mu.edu.iq/node/26>

Author ID (Scopus): <https://www.scopus.com/authid/detail.uri?authorId=55326096000>

ResearchGate: https://www.researchgate.net/profile/Ahmed_Jbara

Google Scholar: <https://scholar.google.com/citations?user=jC6P21oAAAAJ&hl=en>

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