

CURRICULUM VITAE

1. Contact Information

Name: Zinab Hassanien Hassanien Bakr

Birth Day: 08 – 08 – 1985

Nationality: Egyptian

Home Address: 14 Mnshet El-Omera st, Assiut, Egypt.

Work address: Physics department, Faculty of Science, Assiut University, Assiut 71516, Egypt

Job title: Assistant Professor at Physis Department faculty of Science, Assiut University

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2. Education and degrees awarded

- **Doctor of Philosophy (Ph.D.)** in Advanced Materials thesis entitled "*Synthesis and Characterization of Tin Based Hybrid Nanofibers and Nanoflowers as Photoelectrode in Dye-Sensitized Solar Cells* " November 2019, Universiti Malaysia Pahang, Malaysia.
- **Master of Science (M.Sc.)** in **Experimental Solid State Physics**, thesis titled "*Structural and Physical Properties of Cr₂O₃ and Co₃O₄ Nanoparticles*", June 2013, Faculty of Science – Assiut University, Egypt.
- **Master Courses** in **Experimental Solid State Physics**– Faculty of Science, Assiut University, September 2008 (very good).
- **Bachelor of Science (B.Sc., Hons Degree)** in Special Physics – Faculty of Science – Assiut University – May 2006, Excellent with honor degree

3. Publications

Source	Total No. of Papers	Total Citations	H-index
Google Scholar	12	456	7
Scopus ID: 55586164500	8	366	7
Web of Science	8	358	6

Bakr Z, Wali Q, Fakharuddin A, Schmidt-Mende L, Brown T, and Jose R (2017) Advances in hole transport materials engineering for stable and efficient perovskite solar cells. *Nano Energy* 34:271-305

Bakr Z, Wali Q, Ismail J, Elumalai NK, Uddin A, and Jose R (2018) Synergistic combination of electronic and electrical properties of SnO₂ and TiO₂ in a single SnO₂-TiO₂ composite nanofiber for dye-sensitized solar cells. *Electrochimica Acta* 263:524-532

Bakr Z, Wali Q, Yang S, Yousefzadeh M, Padmasree K, Ismail J, Ab. Rahim MH, Yusoff M, and Jose R (2018) Characteristics of ZnO-SnO₂ Composite Nanofibers as a Photoanode in Dye-Sensitized Solar Cells. *Industrial & Engineering Chemistry Research*

Bakr Z, Wali Q, Ismail J, Elumalai NK, Uddin A, and Jose R (2018) Data of chemical analysis and electrical properties of SnO₂-TiO₂ composite nanofibers. *Data in Brief* 18

Fakharuddin A, Rajan j, Wali Q, **Bakr Z**, and Manshor N (2016) SnO₂-TiO₂ hybrid nanofibers for efficient dye-sensitized solar cells. *Solar Energy* 132:395-404

Pal B, **Bakr Z**, Krishnan S, Yusoff M, and Jose R (2018) Large scale synthesis of 3D nanoflowers of SnO₂/TiO₂ composite via electrospinning with synergistic properties. *Materials Letters* 225

Makhlouf S, **Bakr Z**, Aly K, and Moustafa M (2013) Structural, electrical and optical properties of Co₃O₄ nanoparticles. *Superlattices and Microstructures* 64:107-117

Makhlouf S, **Bakr Z**, Al-Attar H, and Moustafa MS (2013) Structural, morphological and electrical properties of Cr₂O₃ nanoparticles. *Materials Science and Engineering: B* 178:337-343

4. Work Experience

1. **Assistant Professor** at Physics department, Faculty of Science, Assiut University, Assiut, Egypt, from Feb. 2020 till now.
2. **Ph.D. Researcher** at Faculty of Industrial Science and Technology, University Malaysia Pahang (UMP), Malaysia, from Oct. 2014 till Nov. 2019 (on leave from Assiut University)

3. **Assistant Lecturer** at Physics Department faculty of Science, Assiut University, Assiut 71516, Egypt, from March June 2013 till now.
4. **Demonstrator** at Physics Department faculty of Science, Assiut University, Assiut 71516, Egypt, from Jan. 2007 to June 2013.

5. Computer Skills

- Very good user
- Familiar with all Microsoft office programs
- Familiar with some Scientific programs such as (Igor- Origin)

6. Teaching Experience

I have around 12 (2007-now) years of teaching experience with Physics subjects. In addition, I prepared and marked many midterm exams. I have taught the following practical courses for undergraduate students:

6.1: Lectures Courses

- * Physics (principles of modern Physics) for 2th year Geology and Chemistry students
- * General Physics (heat and thermodynamics) for 1st year Physics students

6.2: Practical lab

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|-----------------------------------|-----------------------------|
| * Introduction of General physics | * Solid State Physics |
| * Modern Physics | * Electricity and Magnetism |
| * Thermodynamic Physics | * Semiconductors Physics |

6.3: International Teaching

In addition, I have involved in teaching undergraduate students during my Ph.D. study at Faculty of Sciences & Technology, Univesriti Malaysia Pahang in the period from Oct. 2014 till Nov. 2019 as a part of the duties of the Doctoral Scholarship Scheme (DSS). I got a lot of teaching experience in Chemistry and Materials Science subjects which were in English language.

9.4: Online Teaching

I have experience in using different platforms and software for online learning, such as Microsoft teams, Google classrooms, Zoom, Blackboard, etc.

7. Scientific Experience

7.1 Materials Characterization

- * X-Ray Powder Diffraction (XRD)
- * Transmission Electron Microscope (TEM)
- * N₂ Adsorption-Desorption Techniques (BET)
- * Thermal Analysis Techniques (DSC–TGA–DTA)
- * Field Emission Scanning Electron Microscope (FESEM)
- * Raman Spectroscopy
- * Atomic Absorption Spectroscopy (AAS)
- * Infrared Spectroscopy (IR)
- * Laser Particle Size Analyzer
- * X-ray Photoelectron Spectroscopy (XPS)

7.2 Materials Application

- * Solar Cells
- * Electrical Applications

8. Language Skills

- Arabic: (Mother Language)
- English: (Very good Writing and Speaking)
- **IELTS** overall **band 5.5** (Sept. 2014)

9. Google Scholar – Scopus – Author details

1. Google scholar: <https://scholar.google.com/citations?user=9Hp5wswAAAAJ&hl=en>
2. Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55586164500>
3. Researchgate: https://www.researchgate.net/profile/Zinab_Bakr2
4. University page: http://www.aun.edu.eg/membercv.php?M_ID=523