MOHAMED OKIL SHAWKY ABDEL-WAHAB

Assistant Professor, Benha Faculty of Engineering, Benha University

PERSONAL INFORMATION

- **Scientific Name:** Mohamed Okil **&** M. Okil
- **Marital Status:** Married
- **Military Status:** Completed
- **Address:** Diarb Negm, Al Sharqia, Egypt
- **Mobile:** 002 012 8458 0168 **&** 002 010 6209 0206
- **ORCID:** *https://orcid.org/0000-0003-3816-3756*
- **Official E-mail:** *mohamed.okil@bhit.bu.edu.eg*
- **Alternative E-mail:** *mohamedokil37@gmail.com*

PERSONAL CHARACTERISTICS

- Quick learner.
- Leadership skills.
- Good communication skills.
- Ability to work within a team.

EDUCATIONAL QUALIFICATIONS

- **Ph.D. in Engineering Physics**, " Novel Multi-Junction Solar Cell Structures Based on Silicon Substrates ", Benha Faculty of Engineering, Benha University, September 2023.

- **M.Sc. in Engineering Physics**, " Synthesis and Investigation of Physical Properties of Some Nanocomposites ", Benha Faculty of Engineering, Benha University, May 2019.
  (*University Award for M.Sc. Theses in Engineering Sciences Field, 2020/2021*)

- **High Diploma in Engineering Physics**, Benha Faculty of Engineering, Benha University, June 2015.
  Grade: Excellent.

- **B.Sc. of Engineering & Technology in Electrical Engineering Technology**, Benha Faculty of Engineering, Benha University, June 2011.
  Grade: Very good with Honors (83.86%).
  Graduation Project Grade: Excellent.

PROFESSIONAL ASSOCIATION

- Member of Egyptian Syndicate of Engineers, 2012.

WORK EXPERIENCES

- **Assistant Professor** of Engineering Physics, Basic Engineering Sciences Department, Benha Faculty of Engineering, Dec. 2023 – Present.
- **Assistant Lecturer** of Engineering Physics, Basic Engineering Sciences Department, Benha Faculty of Engineering, July 2019 – Dec. 2023.
- **Demonstrator** of Engineering Physics, Basic Engineering Sciences Department, Benha Faculty of Engineering, Feb. 2013 – July 2019.

TEACHING EXPERIENCES

I have experience in teaching or assisting in teaching the following subjects:

- **Modern physics**, Benha Faculty of Engineering, Sep. 2016 – Present.
- **Engineering physics**, Benha Faculty of Engineering, Sep. 2014 – Present.

19 PUBLISHED PAPERS (H-INDEX = **8**, CITATIONS = **321**)

1. M.S. Salem, A. Shaker, **M. Okil**, L. Li, C. Chen, A.N. Aledaily, K.A. Al-Dhlan, A. Zekry, *Design considerations of CdSe solar cells for indoor applications under white LED illumination*, Sol. Energy Mater. Sol. Cells. 276 (2024) 113087. **[Q1]** https://doi.org/10.1016/j.solmat.2024.113087.
2. M.S. Salem, A. Shaker, C. Chen, L. Li, M. Abouelatta, A.N. Aledaily, W. Zein, **M. Okil**, *Full optoelectronic simulation of all antimony chalcogenide thin film tandem solar cell: Design routes from 4-T to 2-T configuration*, Ain Shams Eng. J. 15 (2024) 102919. **[Q1]** https://doi.org/10.1016/j.asej.2024.102919.
3. M.S. Salem, **M. Okil**, A. Shaker, M. Abouelatta, M.M. Salah, K.A. Al-Dhlan, M. Gad, *TCAD-Based Design and Optimization of Flexible Organic/Si Tandem Solar Cells*, Crystals. 14 (2024) 584. **[Q2]** https://doi.org/10.3390/cryst14070584.
4. M.S. Salem, A. Shaker, A.N. Aledaily, A. Alanazi, K. A Al-Dhlan, **M. Okil**, *Comprehensive design and analysis of thin film Sb_2S_3 /CIGS tandem solar cell: TCAD simulation approach*, Phys. Scr. 99 (2024) 075511. **[Q2]** https://doi.org/10.1088/1402-4896/ad514a.
5. T.I. Alanazi, A. Shaker, M. Gad, **M. Okil**, *Optimization of all-polymer/Sb_2Se_3 tandem solar cells for enhanced efficiency: a comprehensive TCAD modeling approach*, Phys. Scr. 99 (2024) 065516. **[Q2]** https://doi.org/10.1088/1402-4896/ad4315.
6. M.S. Salem, **M. Okil**, A. Shaker, M. Abouelatta, A.N. Aledaily, K.A. Al-dhlan, M.T. Alshammari, M.M. Salah, M. El Sabbagh, *Optimizing Transport Carrier Free All-Polymer Solar Cells for Indoor Applications : TCAD Simulation under White LED Illumination*, Polymers. 16 (2024) 1412. **[Q1]** https://doi.org/10.3390/polym16101412.
7. S.M.H. Qaid, A. Shaker, **M. Okil**, C. Gontrand, M. Alkadi, H.M. Ghaithan, M.M. Salah, *Optoelectronic Device Modeling and Simulation of Selenium-Based Solar Cells under LED Illumination*, Crystals. 13 (2023) 1668. **[Q2]**

https://doi.org/10.3390/cryst13121668.

8. S.M.H. Qaid, A. Shaker, **M. Okil**, M. Alkadi, A.A.A. Ahmed, W. Zein, *Optimizing CBTSSe solar cells for indoor applications through numerical simulation*, Opt. Quantum Electron. 55 (2023) 1245. **[Q2]** https://doi.org/10.1007/s11082-023-05541-x.
9. T.I. Alanazi, O.I. Eid, **M. Okil**, *Numerical study of flexible perovskite/Si tandem solar cell using TCAD simulation*, Opt. Quantum Electron. 55 (2023) 1152. **[Q2]** https://doi.org/10.1007/s11082-023-05320-8.
10. M.S. Salem, **M. Okil**, A. Shaker, A. Albaker, M. Alturki, *Design of n-i-p and p-i-n Sb_2Se_3 solar cells: role of band alignment*, J. Phys. Energy. 5 (2023) 045007. **[Q1]** https://doi.org/10.1088/2515-7655/acf688.
11. **M. Okil**, A. Shaker, M.M. Salah, T.M. Abdolkader, I.S. Ahmed, *Investigation of Polymer/Si Thin Film Tandem Solar Cell using TCAD Numerical Simulation*, Polymers. 15 (2023) 2049. **[Q1]** https://doi.org/10.3390/polym15092049.
12. **M. Okil**, A. Shaker, I.S. Ahmed, T.M. Abdolkader, M.S. Salem, *Evaluation of a proposed barium di-silicide tandem solar cell using TCAD numerical simulation*, Opt. Quantum Electron. 55 (2023) 475. **[Q2]** https://doi.org/10.1007/s11082-023-04734-8
13. **M. Okil**, A. Shaker, I.S. Ahmed, T.M. Abdolkader, M.S. Salem. Design and Analysis of Sb_2S_3/Si Thin Film Tandem Solar Cell. *Sol. Energy Mater. Sol. Cells* 253 (2023) 112210. **[Q1]** *https://doi.org/10.1016/j.solmat.2023.112210*
14. **M. Okil**, M.S. Salem, Tarek M. Abdolkader, A. Shaker, *From Crystalline to Low-cost Silicon-based Solar Cells: a Review*, Silicon (2021) 1-17. **[Q3]** *https://doi.org/10.1007/s12633-021-01032-4*
15. M.M. ElFaham, **M. Okil**, A.M. Mostafa, *Effects of post-laser irradiation on the optical and structure properties of Al_2O_3 nanoparticles produced by laser ablation*, J. Appl. Phys. 128, 153104 (2020). **[Q2]** *https://doi.org/10.1063/5.0022554*
16. M.M. ElFaham, **M. Okil**, A.M. Mostafa, *Fabrication of magnesium metallic nanoparticles by liquid-assisted laser ablation*, J. Opt. Soc. Am. B. 37(2020)2620. **[Q2]** *https://doi.org/10.1364/JOSAB.398543*
17. **M. Okil**, M.M. ElFaham, S.I. El-dek, *Fascinating thermo-mechanical features of layered hydroxides/MWCNTs nanocomposites*, J. Alloys Compd. 788 (2019) 912–924. **[Q1]** *https://doi.org/10.1016/j.jallcom.2019.02.218*
18. M.M. ElFaham, **M. Okil**, A.M. Mostafa, *Limit of detection and hardness evaluation of some steel alloys utilizing optical emission spectroscopic techniques*, Opt. Laser Technol. (2018). **[Q2]** *https://doi.org/10.1016/j.optlastec.2018.07.022*
19. M.M. ElFaham, **M. Okil**, N.M. Nagy, *Optical emission spectroscopy for concrete strength evaluation utilizing calcium lines*, Opt. Laser Technol. 106 (2018) 69–75. **[Q2]** *https://doi.org/10.1016/j.optlastec.2018.03.018*

WEBSITES, PROFILES

- **Official Page:** *https://bu.edu.eg/staff/mohamed.okil*
- **ORCID:** *https://orcid.org/0000-0003-3816-3756*
- **Scopus:** *https://www.scopus.com/authid/detail.uri?authorId=57201472644*
- **Google Scholar:** *https://scholar.google.com.eg/citations?user=FkasjLQAAAAJ&hl=en*
- **Research Gate:** *https://www.researchgate.net/profile/Mohamed_Okil*

COMPUTER SKILLS

- Have the **ICDL** certificate, 2012.
- Professional user using solar cell simulation programs " **SCAPS**, and **Silvaco Atlas** ".
- Professional user using technical software programs " **MATLAB**, **LIBS++**, **Origin**, and **Gwyddion** ".

LANGUAGE SKILLS

- **Arabic**: Native
- **English**: Fluent in reading and writing
  Intermediate in speaking and listening

REFERENCES

- **Prof. Dr. Tarek Mohamed Abdolkader Hasan** **(***Ph.D. Research Work Supervisor***)**
  Professor of Engineering Physics, Benha Faculty of Engineering, Benha University.
  Official E-mail: *tarek.Abdolkader@bhit.bu.edu.eg* **Mobile:** 002 015 5167 8999

- **Prof. Dr. Ahmed Shaker Ahmed Ali Ghazala** **(***Ph.D. Research Work Supervisor***)**
  Professor of Engineering Physics, Faculty of Engineering, Ain Shams University.
  Official E-mail: *ahmed.shaker@eng.asu.edu.eg* **Mobile:** 002 012 2248 1434

- **Prof. Dr. Samaa Imam Mahmoud El-Dek** **(***M.Sc. Research Work Supervisor***)**
  Professor of Materials Science and Nanotechnology, Faculty of Post Graduate Studies for Advanced Sciences, Beni-Suef University.
  Official E-mail: *didi5550000@gmail.com* **Mobile:** 002 010 2920 0873

- **Prof. Dr. Mohamed Mostafa ElFaham** **(***M.Sc. Research Work Supervisor***)**
  Professor of Engineering Physics, Benha Faculty of Engineering, Benha University.
  Official E-mail: *dr.mmostafa.elfaham@bhit.bu.edu.eg* **Mobile:** 002 011 4996 3330