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RESEARCH

Areas: Electrical and Electronic Engineering · Education · Materials Chemistry · Biomedical Engineering · Electronic, Optical and Magnetic Materials · Pollution

RESEARCH SUMMARY

14	105	3	2	0.54	7%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 14 publications listed below, 2020–2026. Field-weighted impact is the mean over the 14 works scored for it; 1.00 is the world average for works of the same field, type and year. 1 of the 14 papers scored for it are among the world's most cited tenth for their field, type and year.

EDUCATION AND QUALIFICATIONS

University of Electronic Science and Technology of China - Qingshuihe Campus
School of physical electronics, Chengdu, China

PUBLICATIONS

Journal articles 13

1. Quashigah Johnray Ziadzi, Haihua Wu, Esther Dzigbogi, **Michael Gyan**, Shixiong Deng, Jiyuan Wang, Richard Adei-Boakye, Yanbei Hou (2026). Dual-functional tailoring of mechanical and microwave-absorbing properties in SLS-printed NFG/MZFO composites via epoxy/silicon impregnation. *Journal of Materials Science Materials in Electronics*. https://doi.org/10.1007/s10854-026-16610-8
2. **MICHAEL GYAN** (2025). A Study on Two Dimensional (2D) Piezoelectric Semiconductor Materials: A Review. *University of Thi-Qar Journal of Science*. https://doi.org/10.32792/utq/utjsci/v12i1.1329
3. Quashigah Johnray Ziadzi, Haihua Wu, **Michael Gyan**, Esther Dzigbogi, Bin Chao, Shixiong Deng (2025). Review of the fabrication methods of microwave absorbers via selective laser sintering and fused deposition modeling. *Journal of Materials Science Materials in Electronics*. https://doi.org/10.1007/s10854-025-15639-5
4. Cynthia Jebuni-Adanu, **Michael Gyan**, Desmond Appiah, Bright Owusu Ansah, Robert Wilson, Charles Enoch Mensah (2024). Improving Students' Performance in Resolution of Vectors Using PhET Interactive Simulations. *Schrödinger Journal of Physics Education*. https://doi.org/10.37251/sjpe.v5i3.1078
5. **MICHAEL GYAN**, Abraham Amankwah, Jonathan Mensah-Bonsu, Brown-Klutse Nana Ama (2024). Prospecting for Air Pollution Hot Spots in the Atmosphere using Lapse Rate. *Journal of Environmental Studies/Journal of Environmental Studies*. https://doi.org/10.21608/jesj.2024.256265.1062
6. Victor Antwi, **Michael Gyan**, Desmond Appiah, Isaac Kwesi Acquah, Fortune Addo Wuver, Cynthia Jebuni-Adanu (2024). Theoretical study of the strong piezo-phototronic effect in 2D monochalcogenides for multi-junction solar cells. *Physica Scripta*. https://doi.org/10.1088/1402-4896/ad7cdc
7. Seth Bedu Rockson, Madihah Md Rasid, Mohd Shafiq Anuar, Siti Maherah Hussin, Norzanah Rosmin, Norjulia Mohamad Nordin, **Michael Gyan** (2023). DESIGNING TECHNO-ECONOMIC OFF-GRID PHOTOVOLTAIC SYSTEM USING AN IMPROVED DIFFERENTIAL EVOLUTION ALGORITHM. *Jurnal Teknologi*. https://doi.org/10.11113/jurnalteknologi.v85.18334
8. Fortune Addo-Wuver, Victor Antwi, Isaac Kwesi Acquah, Desmond Appiah, **Michael Gyan**, Cynthia

Jebuni-Adanu, Peter Opoku (2023). IMPROVEMENT OF SENIOR HIGH STUDENTS' PERFORMANCE IN HEAT TRANSFER USING PRACTICAL ACTIVITIES IN EFFUTU MUNICIPAL, GHANA. *European Journal of Education Studies*. https://doi.org/10.46827/ejes.v10i9.4997

9. Owusu Fordjour Aidoo, Jonathan Osei-Owusu, Shaphan Yong Chia, Aboagye Kwarteng Dofuor, Akua Konadu Antwi-Agyakwa, Harry Okyere, **Michael Gyan**, George Edusei, Kodwo Dadzie Ninsin, Rahmat Quaigrane Duker, Shahida Anusha Siddiqui, Christian Borgemeister (2023). Remediation of pesticide residues using ozone: A comprehensive overview. *The Science of The Total Environment*. https://doi.org/10.1016/j.scitotenv.2023.164933
10. Cynthia Jebuni-Adanu, Victor Antwi, Isaac Kwesi Acquah, Desmond Appiah, **Michael Gyan**, Fortune Addo Wuver, Issahaku Sontaa Jakalia, Bernard Sarkyi (2023). Utilizing Physics Education Technology (PhET) for Improving Students' Understanding of Energy Conversion and Conservation in a Senior High Technical School. https://doi.org/10.7176/jep/14-8-06
11. Eli Danladi, Muhammad Kashif, Thomas Daniel, Christopher Achem, Matthew Alpha, **Michael Gyan** (2022). 7.379 % Power Conversion Efficiency of a Numerically Simulated Solid-State Dye-Sensitized Solar Cell with Copper (I) Thiocyanate as a Hole Conductor. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2022-3-03
12. **Michael Gyan**, Joseph Parbby, Francis E. Botchey (2022). Enhanced Third Generation Semiconductor Material-Based Solar Cell Efficiency by Piezo-Phototronic Effect. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2022-1-10
13. **Michael Gyan**, Francis E. Botchway, Joseph Parbey (2020). Electronic Properties of Bulk and Single-Layer MoS2 Using ab Initio DFT: Application of Spin-Orbit Coupling (SOC) Parameters. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2020-4-09

Book chapters 1

1. Joseph Parbey, Fehrs Adu-Gyamfi, **Michael Gyan** (2024). Progress in Cathode Materials for Methanol Fuel Cells. *IntechOpen eBooks*. https://doi.org/10.5772/intechopen.1003869