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RESEARCH

Interests	Industrial Engineering · Optimisation of Manufacturing Processes · Renewable Energy · Food Policy · Manufacturing · Health and Safety · Quality Assurance · Gender · Energy Policy
Areas	Pollution · Energy Engineering and Power Technology · Electrical and Electronic Engineering · Renewable Energy, Sustainability and the Environment · Artificial Intelligence · Waste Management and Disposal

RESEARCH SUMMARY

43	1,362	17	24	3.40	25%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 43 publications listed below, 2011–2026. Field-weighted impact is the mean over the 32 works scored for it; 1.00 is the world average for works of the same field, type and year. 8 of the 32 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 39

1. M. Daly, S. Pye, P. Trotter, C. Bataille, M. Akute, M. Bergman, G. Bravo, H. Bui, D. Buira, J. Burton, … **L. D. Mensah** and 21 others (2026). Addressing context-specific energy modelling risks and dynamics in low- and middle-income countries. *Nature Energy*. https://doi.org/10.1038/s41560-025-01962-y
2. **LD Mensah** (2026). Integration at KNUST. *Empowering Ghana's Engineering Future: A Model for Professional Education in Renewable Energy—and beyond*. https://books.google.com/books?hl=en&lr=&id=QeO4EQAAQBAJ&oi=fnd&pg=PA70&dq=info:7Tc_UhQ74h0J:scholar.google.com&ots=rtC9ufeNUX&sig=xDFHEPMJ51AzFJmtykOdsf7ArjU
3. Theophilus Frimpong Adu, **Lena Dzifa Mensah**, Mizpah Ama Dziedzorm Rockson, Francis Kemausuor (2025). Decision support systems for waste-to-energy technologies: A systematic literature review of methods and future directions for sustainable implementation in Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2025.e42353
4. Marshet M. Admas, **Lena D. Mensah**, Denis E.K. Dzebre, Richard Arthur, David A. Quansah (2025). Estimating the carbon footprint of Ethiopian higher education institutions: A case study of Debre Markos University. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2025.104911
5. RJ Tanyi, **LD Mensah**, A Ntiamoah, DA Quansah (2025). Feedstocks and Pathways, and Its Prospects in Sub-Saharan Africa. *African Green Transition Through Innovative Pathways*. https://books.google.com/books?hl=en&lr=&id=zk1nEQAAQBAJ&oi=fnd&pg=PA223&dq=info:OTR3bEMvdd4J:scholar.google.com&ots=jOAv9jJdYi&sig=NTkOBgcmrnRdkA-WOSXewLfNTdk
6. Theophilus Frimpong Adu, **Lena Dzifa Mensah**, Mizpah Ama Dziedzorm Rockson, Francis Kemausuor (2025). Forecasting municipal solid waste generation and composition using machine learning and GIS techniques: A case study of Cape Coast, Ghana. *Cleaner Waste Systems*. https://doi.org/10.1016/j.clwas.2025.100218
7. Theophilus Frimpong Adu, Emmanuel Papa Brew, **Lena Dzifa Mensah**, Mizpah Ama Dziedzorm Rockson, Francis Kemausuor (2025). Optimal siting of waste-to-energy facilities in cape coast metropolis using an

integrated GIS-based MCDA and waste characterization approach. *Cleaner Waste Systems*. https://doi.org/10.1016/j.clwas.2025.100353

8. Robinson J. Tanyi, **Lena D. Mensah**, Augustine Ntiamoah, David A. Quansah, Muyiwa S. Adaramola (2025). Systematic Literature Review of Hydrogen Production Technologies, Feedstocks and Pathways, and Its Prospects in Sub-Saharan Africa. *World sustainability series*. https://doi.org/10.1007/978-3-031-87043-9_12
9. Eric Agyeman, David A. Quansah, Augustine Ntiamoah, **Lena D. Mensah**, Emmanuel W. Ramde (2025). Toward a circular economy in Ghana's renewable energy sector: A quantitative assessment of waste from solar photovoltaic modules in Ghana. *International Journal of Green Energy*. https://doi.org/10.1080/15435075.2025.2469136
10. Theophilus Frimpong Adu, **Lena Dzifa Mensah**, Mizpah Ama Dziedzorm Rockson, Francis Kemausuor (2025). Trends and challenges in waste-to-energy technologies: A bibliometric analysis focused on developing countries. *Cleaner Waste Systems*. https://doi.org/10.1016/j.clwas.2025.100438
11. Rahimat O. Yakubu, **Lena D. Mensah**, David A. Quansah, Muyiwa S. Adaramola (2024). A systematic literature review of the bifacial photovoltaic module and its applications. *The Journal of Engineering*. https://doi.org/10.1049/tje2.12421
12. Husserl Djouodjinang Fonou, Armand Fopah-Lele, **Lena Dzifa Mensah**, Rahimat Oyiza Yakubu, David Ato Quansah (2024). Global status and prospects for hybrid hydrogen-natural gas systems for power plants in Sub-Saharan Africa. *Clean Energy*. https://doi.org/10.1093/ce/zkae078
13. Husserl Djouodjinang-Fonou, David Ato Quansah, **Mensah Lena Dzifa**, Rahimat Oyiza Yakubu, Armand Fopah-Lele (2024). Investigation of hybrid power-to-hydrogen/natural gas and hydrogen-to-X system in Cameroon. *Energy Reports*. https://doi.org/10.1016/j.egyr.2024.05.007
14. Romain Akpahou, **Lena D. Mensah**, David A. Quansah, Francis Kemausuor (2024). Long-term energy demand modeling and optimal evaluation of solutions to renewable energy deployment barriers in Benin: A LEAP-MCDM approach. *Energy Reports*. https://doi.org/10.1016/j.egyr.2024.07.055
15. Romain Akpahou, Flavio Odoi-Yorke, **Lena D. Mensah**, David A. Quansah, Francis Kemausuor (2024). Strategizing towards sustainable energy planning: Modeling the mix of future generation technologies for 2050 in Benin. *Renewable and Sustainable Energy Transition*. https://doi.org/10.1016/j.rset.2024.100079
16. Alfred Dawson Quansah, Patrick Boakye, **Lena D. Mensah**, David A. Quansah (2024). Systematic literature review on the potential of using solar photovoltaic to power sea water desalination on offshore petroleum facilities. *Energy Reports*. https://doi.org/10.1016/j.egyr.2024.09.048
17. Robinson J Tanyi, **Lena D Mensah**, Augustine Ntiamoah, David A Quansah, Muyiwa S Adaramola (2024). Techno-economic assessment of hydrogen production in Ghana through PV electrolysis and biomass gasification. *Oxford Open Energy*. https://doi.org/10.1093/ooenergy/oiae014
18. Louis Kwasi Osei, Flavio Odoi-Yorke, Richard Opoku, Bismark Baah, George Yaw Obeng, **Lena Dzifa Mensah**, Francis Kofi Forson (2024). Techno-economic viability of decentralised solar photovoltaic-based green hydrogen production for sustainable energy transition in Ghana. *Solar Compass*. https://doi.org/10.1016/j.solcom.2024.100068
19. Rahimat O. Yakubu, David A. Quansah, **Lena D. Mensah**, Wisdom Ahiataku-Togobo, Peter Acheampong, Muyiwa S. Adaramola (2023). Comparison of ground-based and floating solar photovoltaic systems performance based on monofacial and bifacial modules in Ghana. *Energy Nexus*. https://doi.org/10.1016/j.nexus.2023.100245
20. J.O. Akowuah, **L.D. Mensah**, P. Obah-Lateo, G. Obeng-Akrof (2023). Effect of Drying Temperature on Proximate Composition and Viability of Maize Dried in a Solar Biomass Hybrid Dryer. *Agricultural and Food Science Journal of Ghana*. https://doi.org/10.4314/afsjg.v15i1.6
21. Romain Akpahou, **Lena D. Mensah**, David A. Quansah, Francis Kemausuor (2023). Energy planning and modeling tools for sustainable development: A systematic literature review. *Energy Reports*. https://doi.org/10.1016/j.egyr.2023.11.043
22. S. B. Fofana, F. A. Nyarko, **L. D. Mensah**, G. Takyi (2023). Implementation of flexible manufacturing

systems in Africa: Multiple case studies in the Gambia and Ghana. *Nigerian Journal of Technological Development*. https://doi.org/10.4314/njtd.v20i1.1401

23. Romain Akpahou, **Lena D Mensah**, David A Quansah (2023). Renewable energy in Benin: current situation and future prospects. *Clean Energy*. https://doi.org/10.1093/ce/zkad039
24. Flavio Odoi-Yorke, Romain Akpahou, Richard Opoku, **Lena D. Mensah** (2023). Technical, financial, and emissions analyses of solar water heating systems for supplying sustainable energy for hotels in Ghana. *Solar Compass*. https://doi.org/10.1016/j.solcom.2023.100051
25. **Lena Dzifa Mensah**, Dzebre D.E.K. (2022). CHARACTERISATION OF A FIBRE REINFORCED MATERIAL FOR SMALL WIND TURBINE APPLICATIONS. *Journal of Sustainable Energy*. https://www.researchgate.net/profile/Denis-Dzebre/publication/365726852_CHARACTERISATION_OF_A_FIBRE_REINFORCED_MATERIAL_FOR_SMALL_WIND_TURBINE_APPLICATIONS/links/63803b9b554def61936b91b9/CHARACTERISATION-OF-A-FIBRE-REINFORCED-MATERIAL-FOR-SMALL-WIND-TURBINE-APPLICATIONS.pdf
26. Godwin Kafui Ayetor, Denis Kwame Edem Dzebre, **Lena Dzifa Mensah**, Samuel Boahen, Kofi Owura Amoabeng, Godwin Fabiola Kwaku Tay (2022). Comparing the Cost per Mile of Electric Vehicles and Internal Combustion Engine Vehicles in Ghana. *Transportation Research Record Journal of the Transportation Research Board*. https://doi.org/10.1177/03611981221135804
27. Rahimat O Yakubu, **Lena D Mensah**, David A Quansah, Muyiwa S Adaramola (2022). Improving solar photovoltaic installation energy yield using bifacial modules and tracking systems: An analytical approach. *Advances in Mechanical Engineering*. https://doi.org/10.1177/16878132221139714
28. Rahimat O. Yakubu, Maame T. Ankoh, **Lena D. Mensah**, David A. Quansah, Muyiwa S. Adaramola (2022). Predicting the Potential Energy Yield of Bifacial Solar PV Systems in Low-Latitude Region. *Energies*. https://doi.org/10.3390/en15228510
29. Prince Yaw Andoh Andoh, Charles Kofi Kafui Sekyere, **L. D. Mensah**, D. E.K. Dzebre (2021). Forecasting Electricity Demand In Ghana With The Sarima Model. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v3i1.288
30. Theophilus Frimpong Adu, Emmanuel Kwaku Anto, Emmanuel Ramde, **Lena Dzifa Mensah** (2020). Determination of Optimum Tilt Angle for Rooftop Solar Photovoltaic System Installation for KikuKinderhaus in Kumasi. *International Journal of Energy and Environmental Science*. https://doi.org/10.11648/j.ijees.20200501.12
31. **DL Mensah** (2019). Performance Evaluation of a Utility-Scale Grid-Tied Solar Photovoltaic(PV) in Ghana. *Energy for Sustainable Development*. https://www.sciencedirect.com/science/article/pii/S0973082618308317
32. Wemogar Elijah Borweh, Emmanuel Asuming Frimpong, **Lena Dzifa Mensah** (2018). Design of an Optimal off-grid Hybrid Energy System for a Rural Community. *Jurnal Nasional Teknik Elektro*. https://doi.org/10.25077/jnte.v7n3.558.2018
33. **Lena D. Mensah**, John O. Yamoah, Muyiwa S. Adaramola (2018). Performance evaluation of a utility-scale grid-tied solar photovoltaic (PV) installation in Ghana. *Energy Sustainable Development/Energy for sustainable development*. https://doi.org/10.1016/j.esd.2018.11.003
34. **LD Mensah**, F Kemausuor (2017). INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY EXPERIMENTAL ANALYSIS OF THREE COMMON TREE SPECIES IN GHANA. *International Journal of Engineering Sciences & Research Technology*. https://www.academia.edu/download/91769507/18.pdf
35. **Mensah L.D** (2017). Technical Analysis of Jatropha and Palm Kernel Biodiesel as the Sole Fuel Source for Powering Diesel Engine. *ARPN Journal of Science and Technology*.
36. Martin Ansong, **Lena D. Mensah**, Muyiwa S. Adaramola (2017). Techno-economic analysis of a hybrid system to power a mine in an off-grid area in Ghana. *Sustainable Energy Technologies and Assessments*. https://doi.org/10.1016/j.seta.2017.09.001
37. M Ansong, **LD Mensah** (2017). Techno-economic analysis of hybrid system to power a mine in an off-grid

area in Ghana. *Sustainable Energy Technologies and Assessments*. https://www.sciencedirect.com/science/article/pii/S2213138817304721

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39. **LD Mensah** (2011). Implementation of food safety management systems in the UK. *Food control*. https://www.sciencedirect.com/science/article/pii/S0956713511000417

Conference papers 2

1. Rahimat O. Yakubu, **Lena D Mensah**, David A. Quansah, Muyiwa S. Adaramola, Yusuf Hammed (2022). Performance evaluation of bifacial solar PV modules under different climatic regions in Nigeria. *E3S Web of Conferences*. https://doi.org/10.1051/e3sconf/202235402006

2. David A. Quansah, Muyiwa S. Adaramola, **Lena D. Mensah** (2016). Solar Photovoltaics in Sub-Saharan Africa – Addressing Barriers, Unlocking Potential. *Energy Procedia*. https://doi.org/10.1016/j.egypro.2016.12.108

Reports 2

1. **JASY Lena Dzifa Mensah** (2016). GE-TOP Ghana Strategy Proposal – Realizing solar PV projects in a cross-border power supply context' study, part of the Green Economy-Trade Opportunities Project (GE-TOP),. *UNEP*.

2. **Lena Dzifa Mensah** (2015). Green Economy Trade Opportunities Project: Ghana Solar Export Potential Study. *United Nations Environment Programme*.