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RESEARCH

Interests: Fatigue · Fracture · Materials Science · Structure-property-relationship

Areas: Mechanics of Materials · Mechanical Engineering · Building and Construction · Civil and Structural Engineering · Ecology · Materials Chemistry

RESEARCH SUMMARY

58	960	18	28	1.38	11%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 58 publications listed below, 2000–2025. Field-weighted impact is the mean over the 44 works scored for it; 1.00 is the world average for works of the same field, type and year. 5 of the 44 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Dr (Director, Research and Innovation 2012–present
General Studies, Koforidua Technical University, Koforidua, Ghana

EDUCATION AND QUALIFICATIONS

Kwame Nkrumah University of Science and Technology
Kumasi, Ghana

Ph.D 2014–2019
Planning, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Ghana Institute of Planners
Accra, Ghana

PUBLICATIONS

Journal articles 53

1. Eugene Okyere-Kwakye, **Samuel Kwofie**, Isaac Asare-Bediako, Ralph Nyadu-Addo (2025). Examining Factors that Influence Planners' Intention to Share Knowledge with Other Professionals in the Civil Service. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-024-02504-9
2. **Samuel Kwofie**, EA Adjei, CKK Sekyere, F Davis, GY Obeng (2025). Experimental analysis of an institutional solar PV-powered steam cooker sand-based thermal energy storage. *Solar Energy Advances*. https://www.sciencedirect.com/science/article/pii/S266711312500035X
3. Richard Opoku, Flavio Odoi-Yorke, Eunice Akyereko Adjei, Charles K.K Sekyere, Francis Davis, George Yaw Obeng, Michael Kweku Commeh, Francis Kofi Forson, **Samuel Kwofie** (2025). Experimental analysis of an institutional solar PV-powered steam cooker with sand-based thermal energy storage. *Solar Energy Advances*. https://doi.org/10.1016/j.seja.2025.100122

4. Richard Arthur, Clement Nyamekye, **Samuel Kwofie**, Martina Francisca Baidoo (2025). Integrated assessment of bio-methane potential from cocoa pod husk in Ghana using physicochemical characterisation and geospatial techniques. *Scientific African*. https://doi.org/10.1016/j.sciaf.2025.e02795

5. Jeffrey Gabriel Sumboh, Kwasi Agyenkwa-Mawuli, Eyram Schwinger, Irene Owusu Donkor, Jewelna Akorli, Duah Dwomoh, Yvonne Ashong, Dickson Osabutey, Felix Owusu Ababio, Olivia Nusbaum, Debbie Humphries, Michael Cappello, Kwadwo Ansah Koram, **Samuel K. Kwofie**, Michael D. Wilson (2025). Investigating Environmental Determinants of Hookworm Transmission using GPS Tracking and Metagenomics Technologies. *American Journal of Tropical Medicine and Hygiene*. https://doi.org/10.4269/ajtmh.24-0384

6. Clement Mintah, Mark Awe Tachega, Junjian Wang, **Samuel Kwofie**, Elizabeth Addy, George Prince Aning-Agyei, Richard Apatewen Azerigyik, Abigail Arthur (2025). The Mediating Mechanisms of How Business Environment Affects Sectoral Productivity in West Africa. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-025-02624-w

7. Clement Nyamekye, Linda Boamah Appiah, Richard Arthur, Gabriel Osei, Samuel Anim Ofosu, **Samuel Kwofie**, Benjamin Ghansah, Dieter Bryniok (2024). Comparing Supervised and Semi-supervised Machine Learning Methods for Mapping Aquatic Weeds, as Biomass Resource from High-Resolution UAV Images. *Remote Sensing in Earth Systems Sciences*. https://doi.org/10.1007/s41976-024-00119-x

8. Ephraim Magosi, Christopher Dick-Sagoe, Daniel Odoom, **Samuel Kwofie**, Joseph Obeng-Baah (2024). Interrogating Land Administration Procedures and Systems Implementation in Africa: Evidence from Botswana. *E-Journal of Humanities Arts and Social Sciences*. https://doi.org/10.38159/ehass.202451123

9. T.K. Asumadu, K. Mensah-Darkwa, E. Gikunoo, D.E.P. Klenam, M. Vandadi, N. Rahbar, **S. Kwofie**, W.O. Soboyejo (2023). Strain gradient plasticity phenomenon in surface treated plain carbon steel. *Materials Science and Engineering A*. https://doi.org/10.1016/j.msea.2023.144806

10. AK Anning, **S Kwofie**, Delali BK Dovie, Rebecca Owusu (2022). Current Research in Environmental Sustainability. *Current Research in Environmental Sustainability*. https://www.researchgate.net/profile/Moses-Kwadzo/publication/359255395_Pollution_and_climate_change_impacts_on_livelihood_outcomes_of_lagoon_fishermen_in_Central_Region_Ghana/links/63172e1761e4553b956c62db/Pollution-and-climate-change-impacts-on-livelihood-outcomes-of-lagoon-fishermen-in-Central-Region-Ghana.pdf

11. **Samuel Kwofie**, Kwadwo Mensah-Darkwa (2022). Equivalent crack growth model for correlation and prediction of fatigue crack growth under different stress ratios. *International Journal of Fatigue*. https://doi.org/10.1016/j.ijfatigue.2022.107106

12. Mark Appeaning, Helen Owusu-Asante, **Samuel Kwofie**, George Arhin, Andrew Oppong Asamoah, Tawfic Ali, Reginald Roland Amponsah (2022). Improving community participation in clinical trials in Ghana; factors to consider. *Contemporary Clinical Trials Communications*. https://doi.org/10.1016/j.conctc.2022.101012

13. **Samuel Kwofie**, Clement Nyamekye, Linda Appiah Boamah, Frank Owusu Adjei, Richard Arthur, Emmanuel Agyapong (2022). Urban growth nexus to land surface temperature in Ghana. *Cogent Engineering*. https://doi.org/10.1080/23311916.2022.2143045

14. **Samuel Kwofie**, Gabriel Osei, Clement Nyamekye, Richard Arthur, Reginald Quansah, Dieter Bryniok (2022). Water Hyacinth as a Potential Bioenergy Resource for Woodfuel Replacement in Communities Along the Volta Lake in Ghana. *Waste and Biomass Valorization*. https://doi.org/10.1007/s12649-022-02007-1

15. Clement Nyamekye, Samuel Anim Ofosu, Richard Arthur, Gabriel Osei, Linda Boamah Appiah, **Samuel Kwofie**, Benjamin Ghansah, Dieter Bryniok (2021). Evaluating the spatial and temporal variations of aquatic weeds (Biomass) on Lower Volta River using multi-sensor Landsat Images and machine learning. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e07080

16. Clement Nyamekye, Benjamin Ghansah, Emmanuel Agyapong, Emmanuel Obuobie, Alfred Awuah, **Samuel Kwofie** (2021). Examining the performances of true color RGB bands from Landsat-8, Sentinel-2 and UAV as stand-alone data for mapping artisanal and Small-Scale Mining (ASM). *Remote Sensing Applications Society and Environment*. https://doi.org/10.1016/j.rsase.2021.100655

17. Clement Nyamekye, **Samuel Kwofie**, Emmanuel Agyapong, Samuel Anim Ofosu, Richard Arthur, Linda Boamah Appiah (2021). Integrating support vector machine and cellular automata for modelling land cover change in the tropical rainforest under equatorial climate in Ghana. *Current Research in Environmental Sustainability*. https://doi.org/10.1016/j.crsust.2021.100052

18. Clement Nyamekye, Benjamin Ghansah, Emmanuel Agyapong, **Samuel Kwofie** (2021). Mapping changes in artisanal and small-scale mining (ASM) landscape using machine and deep learning algorithms. - a proxy evaluation of the 2017 ban on ASM in Ghana. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2021.100053

19. Clement Nyamekye, **Samuel Kwofie**, Benjamin Ghansah, Emmanuel Agyapong, Linda Appiah Boamah (2020). Assessing urban growth in Ghana using machine learning and intensity analysis: A case study of the New Juaben Municipality. *Land Use Policy*. https://doi.org/10.1016/j.landusepol.2020.105057

20. Richard Arthur, Martina Francisca Baidoo, Gabriel Osei, Linda Boamah, **Samuel Kwofie** (2020). Evaluation of potential feedstocks for sustainable biogas production in Ghana: Quantification, energy generation, and CO 2 abatement. *Sustainable Environment*. https://doi.org/10.1080/23311843.2020.1868162

21. Richard Opoku, George Y. Obeng, Jo Darkwa, **Samuel Kwofie** (2020). Minimizing heat transmission loads and improving energy efficiency of building envelopes in sub-Saharan Africa using bio-based composite materials. *Scientific African*. https://doi.org/10.1016/j.sciaf.2020.e00358

22. Joseph K. Adu, Dzakadzie Fafanyo, Emmanuel Orman, Isaac Ayensu, Cedric D.K. Amengor, **Samuel Kwofie** (2019). Assessing metal contaminants in milled maize products available on the Ghanaian market with Atomic Absorption Spectrometry and Instrumental Neutron Activation Analyser techniques. *Food Control*. https://doi.org/10.1016/j.foodcont.2019.106912

23. **Samuel Kwofie**, Ming-Liang Zhu (2019). Modeling R-dependence of near-threshold fatigue crack growth by combining crack closure and exponential mean stress model. *International Journal of Fatigue*. https://doi.org/10.1016/j.ijfatigue.2019.01.006

24. Mawuli Segbefia, Abigail Opong, **Samuel Kwofie** (2019). Technical Vocational Education Training and Issues of Upgrading. Special Case study of Catering and Hospitality. *Journal of Tourism, Hospitality and Sports*. https://doi.org/10.7176/jths/41-04

25. **Samuel Kwofie**, Kweku Dwomor Kessey, Romanus Dinye (2018). FINANCIAL FACILITIES AND SUSTAINABLE CHILD LABOUR PROGRAMMES IN GHANA. *Advances in Social Sciences Research Journal*. https://doi.org/10.14738/assrj.53.3012

26. **S Kwofie** (2018). Shielding and Radiological Properties Analysis of Pozzolana-Portland Cement (PPC) from Elemental Composition Point of View, Using Neutron Activation Analysis (NAA). *e-Journal of Science & Technology*. http://ejst.uniwa.gr/issues/issue_55/Sogbey_55.pdf

27. **S Kwofie** (2016). Assessment of freshcut fruit handling and vending in the central business area of Koforidua, Ghana. *Asian Journal of Agriculture and Food Sciences*. https://www.academia.edu/download/111511998/2029.pdf

28. Nicholas Apreh Siaw, **Samuel Kwofie** (2016). Assessment of the Effects of the Free Maternal Health Policy on Maternal Health: A Case Study of New Juaben Municipality, Koforidua, Ghana. *International Journal of Business and Social Research*. https://doi.org/10.18533/ijbsr.v6i7.292

29. **S Kwofie** (2016). Comparative model analysis of road traffic accidents in Ghana. *International Journal of Statistics and Applications*. https://scholar.google.com/scholar?cluster=14907800270563423262&hl=en&oi=scholarr

30. CA Adams, **S Kwofie** (2016). Effects of soil properties and geogrid placement on CBR enhancement of lateritic soil for road pavement layers. *American Journal of Civil Engineering and Architecture*. https://scholar.google.com/scholar?cluster=9944695165273307743&hl=en&oi=scholarr

31. **Samuel Kwofie**, Isaac K. Yankey, Godfred K. Abledu (2016). Financial Support for Civil Society Organisations in Ghana: A Study of Natural Resources and Environmental Governance. *International Journal of Business and Social Research*. https://doi.org/10.18533/ijbsr.v6i2.904

32. Solomon Asante-Okyere, Tang Daqing, Emmanuel Enemuoh, **Samuel Kwofie** (2016). Life Cycle

Assessment of Supercritical Coal Power Plant with Carbon Capture and Sequestration in China. *Asian Journal of Environment & Ecology*. https://doi.org/10.9734/ajee/2016/31400

33. **S Kwofie** (2016). Studentsâ€™ Performance in Ghana: A Discriminant Analysis. *International Journal of Business and Social Research*. https://ideas.repec.org/a/mir/mirbus/v6y2016i10p8-20.html
34. Adane Appiah Akaboha, **Samuel Kwofie** (2016). Students' Performance in Ghana: A Discriminant Analysis. *International Journal of Business and Social Research*. https://doi.org/10.18533/ijbsr.v6i10.966
35. **S Kwofie** (2015). Mechanical behaviour of pack carburized AISI 316L austenitic stainless steel. *Journal of the Southern African Institute of Mining and Metallurgy*. https://www.scielo.org.za/scielo.php?pid=S2225-62532015001200008&script=sci_arttext
36. **Samuel Kwofie** (2014). The Effect of Aid: A Case Study in Democratic Ownership and Accountability in Natural Resources and Environmental Governance in Ghana. *RePEc: Research Papers in Economics*. https://doi.org/10.18533/ijbsr.v4i6.304
37. **Samuel Kwofie**, Nima Rahbar (2012). A fatigue driving stress approach to damage and life prediction under variable amplitude loading. *International Journal of Damage Mechanics*. https://doi.org/10.1177/1056789512449638
38. **S Kwofie** (2012). Relaxation of residual stress under fatigue load described in terms of cyclic-plastic deformation model. *Structural Durability & Health Monitoring*. https://scholar.google.com/scholar?cluster=5886086942227470931&hl=en&oi=scholarr
39. **S Kwofie** (2012). The Effect of Notched Designs on the Performance of Bamboo. *Research Journal of Environmental and Earth Sciences*. https://www.airitilibrary.com/Article/Detail/20410492-201201-201507220023-201507220023-8-15
40. **Samuel Kwofie**, Nima Rahbar (2011). An equivalent driving force model for crack growth prediction under different stress ratios. *International Journal of Fatigue*. https://doi.org/10.1016/j.ijfatigue.2011.03.006
41. **Samuel Kwofie**, Meshach B. Ogunniyi (2011). Effects of dialogical argumentation-based workshops on primary and secondary school teachers' ability to co-construct the concept of solubility.
42. **S Kwofie** (2011). Investigation into the Performance of Bamboo using the Notched and the Un-notched Specimen. *Research Journal of Applied Sciences, Engineering and Technology*. https://www.airitilibrary.com/Article/Detail/20407467-201104-201411070020-201411070020-245-251
43. **S Kwofie**, A Andrews, E Mensah (2011). The quality of locally-manufactured cornmill grinding plates. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v31i1.64903
44. **Samuel Kwofie**, Meshach B. Ogunniyi (2011). Using food science concepts to enact science-indigenous knowledge systems classroom based discourses.
45. A Andrews, **S Kwofie** (2010). Corrosion of cast iron mill plates in wet grinding. *Leonardo. Electron. J. Pract. Technol*. https://lejpt.academicdirect.org/A17/get_htm.php?htm=097_108
46. **S. Kwofie** (2009). Plasticity model for simulation, description and evaluation of vibratory stress relief. *Materials Science and Engineering A*. https://doi.org/10.1016/j.msea.2009.03.014
47. **S KWOFIE**, H CHANDLER (2007). Fatigue life prediction under conditions where cyclic creep–fatigue interaction occurs. *International Journal of Fatigue*. https://doi.org/10.1016/j.ijfatigue.2007.01.022
48. **S. Kwofie** (2006). Cyclic creep of copper due to axial cyclic and tensile mean stresses. *Materials Science and Engineering A*. https://doi.org/10.1016/j.msea.2006.04.105
49. H CHANDLER, **S KWOFIE** (2004). A description of cyclic creep under conditions of axial cyclic and mean stresses. *International Journal of Fatigue*. https://doi.org/10.1016/j.ijfatigue.2004.09.009
50. **S. Kwofie** (2003). Description of cyclic hysteresis behaviour based on one-parameter model. *Materials Science and Engineering A*. https://doi.org/10.1016/s0921-5093(03)00221-1
51. **S Kwofie** (2003). Equivalent stress approach to predicting the effect of stress ratio on fatigue threshold stress intensity range. *International Journal of Fatigue*. https://doi.org/10.1016/s0142-1123(03)00169-5
52. **S Kwofie** (2001). An exponential stress function for predicting fatigue strength and life due to mean

stresses. *International Journal of Fatigue*. https://doi.org/10.1016/s0142-1123(01)00044-5

53. **S Kwofie** (2001). Low cycle fatigue under tensile mean stresses where cyclic life extension occurs. *International Journal of Fatigue*. https://doi.org/10.1016/s0142-1123(00)00098-0

Conference papers 3

1. Enemuoh Emmanuel Ugo, **Samuel Kwofie** (2021). Integrating Study Abroad Experience with Teaching Sustainability Course in Africa. https://doi.org/10.18260/1-2-1116-36500
2. Enemuoh Emmanuel Ugo, **Samuel Kwofie** (2021). Integrating Sustainability Analysis with Design: Case Study of Bicycle Frame. https://doi.org/10.18260/1-2-1116-36513
3. **S. Kwofie** (2011). Description and simulation of cyclic stress-strain response during residual stress relaxation under cyclic load. *Procedia Engineering*. https://doi.org/10.1016/j.proeng.2011.04.051

Theses 2

1. **S Kwofie** (2012). Effect of temperature and carbonaceous environment on the fatigue behaviour of AISI 316L austenitic stainless steel. *University of the Witwatersrand, Faculty of Engineering and the Built Environment, School of Chemical and Metallurgical Engineering*. https://www.researchgate.net/profile/Desmond-Klenam/publication/273439143_Effect_of_temperature_and_carbonaceous_environment_on_the_fatigue_behaviour_of_AISI_316L_austenitic_stainless_steel/links/550090090cf2d61f820ea255/Effect-of-temperature-and-carbonaceous-environment-on-the-fatigue-behaviour-of-AISI-316L-austenitic-stainless-steel.pdf
2. **S Kwofie** (2000). Cyclic Plastic Behaviour and Low-cycle Fatigue in Copper. *University of the Witwatersrand*. https://scholar.google.com/scholar?cluster=6450877860763019529&hl=en&oi=scholarr