Michael Miyittah

Senior Lecturer · Environmental Science
University of Cape Coast

ORCID 0000-0002-2033-7108 · Homepage ucc.edu.gh · Blog blog.ucc.edu.gh/m-miyittah · Google Scholar scholar.google.com/citations?user=r1nlZfcAAAAJ&hl=en · Profile scholar.ucc.edu.gh/staff/94756d83-7a54-4ef6-8114-791616c1afff

RESEARCH

Interests: Remediation · Environmental Pollution · Environmental Risk & Impact Assessment · Soil & Environmental · Environmental Chemistry · Soil Chemistry · Phosphorus · Risk Assessment

Areas: Pollution · Waste Management and Disposal · Nutrition and Dietetics · Water Science and Technology · Biomedical Engineering · Environmental Engineering

RESEARCH SUMMARY

57	843	18	26	2.21	21%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 57 publications listed below, 2003–2026. Field-weighted impact is the mean over the 42 works scored for it; 1.00 is the world average for works of the same field, type and year. 9 of the 42 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer/Dr 2011–present
Environmental Science, University of Cape Coast, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

PhD 2005–2009
Soil &Water Science/ Environmental Engineering, University of Florida, Gainesville, United States

PUBLICATIONS

Journal articles 52

1. Delali Benjamin K. Dovie, Mac-Donald Abopaam, Aaron K. Christian, Daniel K. Twerefou, **Michael Miyittah**, Opoku Pabi (2026). Flood experience and risk predictability paradox of households: Implications for structural risk reduction and urban planning in Ghana, Africa. *Habitat International*. https://doi.org/10.1016/j.habitatint.2026.103721
2. Erica Zaja, Will Brownlie, Rajabu Hamisi, Maja Arsic, Adelaide Asante, Hilary Barraclough, André Bationo, Martin Blackwell, Dana Cordell, James Elser, … **Michael Miyittah** and 25 others (2026). Insights from the 8th Sustainable Phosphorus Summit (SPS8). *Research Ideas and Outcomes*. https://doi.org/10.3897/rio.12.e193918
3. Delali Benjamin K. Dovie, Grace Abena Obuah, **Michael Miyittah**, Aaron K. Christian (2026). Settlement morphology, demographics, and governance challenges of water, sanitation, and hygiene in low-income urban communities in Ghana. *Discover Environment*. https://doi.org/10.1007/s44274-026-00894-y
4. Michael Aboah, Emmanuel Agbo Tei, **Michael Miyittah**, Christian Julien Isac Gnimadi (2026). Water Pollution Assessment and Community Perception of Major Rivers in Ghana. *Environmental Health Insights*. https://doi.org/10.1177/11786302261428837
5. Zikrullah Safi, **Michael Miyittah**, Benjamin Kwasi Offei, Godwin Amenorpe (2025). A systematic review of

wet and dry deposition of reactive nitrogen, sulfur, and heavy metals: ecosystem contamination and food chain disruption in Ghana. *Environmental Science Atmospheres*. https://doi.org/10.1039/d5ea00018a

6. Emmanuel Yeboah Okyere, **Michael K Miyittah**, Jones Abrefa Danquah (2025). Assessing the global landscape of microfibre pollution: a systematic review. *Aquatic Ecology*. https://doi.org/10.1007/s10452-025-10199-6

7. Michael Aboah, **Michael Miyittah**, Christiana Odumah Hood (2025). Fuel Communications. *Fuel*. https://www.researchgate.net/profile/Wilson-Ofori-Sarkodie/publication/388388692_Biofuel_in_Ghana_Potentials_and_strategies_for_policy_implementation/links/69678399abecff2489eb16de/Biofuel-in-Ghana-Potentials-and-strategies-for-policy-implementation.pdf

8. Emmanuel Yeboah Okyere, Jones Abrefa Danquah, **Michael K. Miyittah**, John Amoah-Nuamah (2025). Tackling microfibre pollution: a review of policy responses and circular economy innovations in textile sustainability. *Waste Management Bulletin*. https://doi.org/10.1016/j.wmb.2025.100253

9. M.G. Manzeke-Kangara, M.S.A. Blackwell, W.J. Brownlie, E. Zaja, K.A. Frimpong, A.A. Asante, D. Cordell, J.J. Elser, E.K. Gbekor, K. Harris-Gilliam, ... **M. Miyittah** and 11 others (2025). Towards a sustainable phosphorus network in Africa. *Soil Advances*. https://doi.org/10.1016/j.soilad.2025.100067

10. Charles Faseyi, **Michael Miyittah** (2024). A Silent Threat: Impacts of Heavy Metal Pollution on Southwestern Estuarine System of Ghana. *Water Science Conference (WaterSciCon24*. https://ui.adsabs.harvard.edu/abs/2024wsc..conf17144F/abstract

11. Michael Aboah, Iqra Atif, **Michael Miyittah**, Christian Julien Isac Gnimadi, Christiana Odumah Hood, Georgina Sarquah (2024). Assessment of Ghana's current energy types to meet tomorrow's needs. *Fuel Communications*. https://doi.org/10.1016/j.jfueco.2024.100118

12. **MK Miyittah**, M Kwadzo, S Seidu-Larry (2024). Assessment of pesticide exposure risks among cocoa farmers in Western region of Ghana. *International Journal of Pest Management*.

13. Emuobonuvie G. Ayeta, Levi Yafetto, George Lutterodt, Joel F. Ogbonna, **Michael Miyittah** (2024). Groundwater governance and a snapshot of associated issues in selected coastal communities in Ghana. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2024.101164

14. Emuobonuvie G. Ayeta, Levi Yafetto, George Lutterodt, Joel F. Ogbonna, **Michael K. Miyittah** (2024). Groundwater in the coastal areas of Ghana: Quality and associated health risks. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e31652

15. Christiana Odumah Hood, **Michael K. Miyittah**, Charles A. Odame-Ankrah, Keren Abaidoo, Delali Tulasi, Ruth Serwaah Ampontuah, Dennis Kpakpo Adotey, Irene Opoku-Ntim (2024). Indoor Radon Monitoring in Building Types of a Periurban Area in Cape Coast Metropolis, Southern Ghana. *Indoor Air*. https://doi.org/10.1155/2024/8966193

16. Emmanuel Boafo Baidoo, Samuel Kofi Tulashie, **Michael Miyittah**, Enoch Mbawin Alale, Kingsley Enoch Adukpoh, George Wardu Agyekwaga, Philomina Adams Asante (2024). Kinetics and thermodynamic studies on oil extraction from Ghanaian cashew kernel using hexane. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e32421

17. Enoch Mbawin Alale, Samuel Kofi Tulashie, **Michael Miyittah**, Emmanuel Boafo Baidoo, Kingsley Enoch Adukpoh, Enock Opare Dadzie, Clement Akonnor Osei, Bright Komla Gah, Desmond Acquah, Philip Agudah Quasi (2024). Oil produced from Ghana Shea Nut crop for prospective industrial applications. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e31171

18. Iddrisu Amadu, Abdul-Aziz Seidu, Aliu Mohammed, Eric Duku, **Michael K. Miyittah**, Edward Kwabena Ameyaw, John Elvis Hagan, Mohammed Hafiz Musah, Bright Opoku Ahinkorah (2023). Assessing the combined effect of household cooking fuel and urbanicity on acute respiratory symptoms among under-five years in sub-Saharan Africa. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e16546

19. Charles Abimbola Faseyi, **Michael K. Miyittah**, Levi Yafetto (2023). Assessment of environmental degradation in two coastal communities of Ghana using Driver Pressure State Impact Response (DPSIR) framework. *Journal of Environmental Management*. https://doi.org/10.1016/j.jenvman.2023.118224

20. Samuel K. Tulashie, Daniel Dodoo, Emmanuel Ketu, Samuel G.K. Adiku, **Michael K. Miyittah**, Edem Forfoe, Ebenezer Arthur (2023). Environmental and socio-economic benefits of a circular economy for bioethanol

production in the northern part of Ghana. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2023.136131

21. Francis Nsiah, Samuel Kofi Tulashie, **Michael Miyittah**, Francis Nuamah, Francis Worlanyo Tsyawo (2023). Impact assessment of high-risk analytes in produced water from oil and gas industry. *Marine Pollution Bulletin*. https://doi.org/10.1016/j.marpolbul.2023.114921
22. Samuel Kofi Tulashie, Mustapha Iddrisu, **Michael Miyittah**, Abdul-Wadud Ibrahim Atiiga, Stephen Mensah, Amos Kweku Buronyah Dadzie (2023). Large scale production of lipid for biodiesel from green microalgae using wastewater. *Chemical Engineering Communications*. https://doi.org/10.1080/00986445.2023.2185520
23. Daniel Aja, **Michael Miyittah**, Donatus Bapentire Angnuureng (2023). Nonparametric assessment of mangrove ecosystem in the context of coastal resilience in Ghana. *Ecology and Evolution*. https://doi.org/10.1002/ece3.10388
24. Ernest Teye, Charles L. Y. Amuah, Kofi Atiah, Ransford Opoku Darko, Thomas Abindaw, Kwadwo Kusi Amoah, **Michael Miyittah**, Emmanuel Afutu, Rebecca Owusu (2023). Quick Determination of Soil Quality Using Portable Spectroscopy and Efficient Multivariate Techniques. *Journal of Spectroscopy*. https://doi.org/10.1155/2023/2024318
25. Emuobonuvie G. Ayeta, Levi Yafetto, George Lutterodt, Joel F. Ogbonna, **Michael K. Miyittah** (2023). Seasonal variations and health risk assessment of microbial contaminations of groundwater in selected coastal communities of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e18761
26. **Michael K. Miyittah**, Boatemaa Ansah, Moses Kwadzo, Salifu Seidu-Larry, Richard K. Kosivi (2022). Assessment of pesticide exposure risks among cocoa farmers in Western region of Ghana. *International Journal of Pest Management*. https://doi.org/10.1080/09670874.2022.2084175
27. Delali B. K. Dovie, **Michael K. Miyittah**, Daniel E. Dodor, Mawuli Dzodzomenyo, Aaron K. Christian, Reuben Tete-Larbi, Samuel N. A. Codjoe, Ayaga A. Bawah (2022). Earth System's Gatekeeping of “One Health” Approach to Manage Climate-Sensitive Infectious Diseases. *GeoHealth*. https://doi.org/10.1029/2021gh000543
28. Michael Aboah, **Michael K. Miyittah** (2022). Estimating global water, sanitation, and hygiene levels and related risks on human health, using global indicators data from 1990 to 2020. *Journal of Water and Health*. https://doi.org/10.2166/wh.2022.065
29. M Aboah, **Michael K Miyittah** (2022). Modelling global water, sanitation, and hygiene level and related risks on human health, using world development indicators data from 1990 to 2020. *J Water Health*. https://scholar.archive.org/work/nui3sgcu7bho3bfos4skdoqfvu/access/wayback/https://watermark.silverchair.com/jwh2022065.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAA6IwggOeBgkqhkiG9w0BBwagggOPMIIDiwIBADCCA4QGCSqGSIb3DQEHATAeBglghkgBZQMEAS4wEQQMp2uRdf9z3CDv6ORZAgEQgIIDVfWEftDKKIydQiKmd5h4MrG_CwJlkX7OVldfuBwJwawNUOrpv33sGdUUvK7kgr_a8B2QrJZrxY_yNp3xx60C_YrVu-njBKGUl_NG8zdE1F2UTc3DZV8Bz_hk-PF77T82HNH3BzQyJCaozehjGGEVIKr2Mc4UoGjdxbilWDE3oLVd3dVda5MLuo6eSjkQ4ykABcemEPWUTZqpoEzwLpwvmECJgyQ8t4Z44rv4BwHjMcoe918whofUQ4KTni04H5UfUeE67SUFsuRPtxLK1kwlfrd5LgwTWAGevnugiY0GGubIspuDmsBMp3uzxgiZMBr6OvzrQKFADURAi-IOIzB1f8gTafJCJGii5NYxenYygmyIr6AuMQZdw9NxuiGVPXPlUq5eo5zK-pHEtpOG6i5UYAxZAIsr-f2Dy3qzkepDzx3z_peeSldjlPZEDouYxrSKWqYXRkCRJ_un0jdFkMvgXGWHgSZ4nGP-3NEEAWIcp44ruZ0FX3mkK-JqKrDuas0WJYzXjC89tieu83nmEby8xrM-H4Tlx4ybM2M9i6mhwYnjM_BWoCFHYCIkbgo2s5SMuHrQcAmm5efKQ2kJvO6kLkWR79xo0AfdjAzAlDnREOgR-lAQ25inBpiFYHO290DiXJNM_Kl7nVueZ5HAOIJzkkdSx8lMN3hyjFzyyrXS6y2shpxqh4bBV2cFyIcKk52ISex_I_Sc5U_TmeodikNwGItSkALf1ulLQcv02N_QLxSa6izpRr-hNivWGYDr6gDj7ap4oSoYV9RhsvPBD5wdJAxzJZx6OROgSC6oVNkLoed7xJXoZ69mcglDgEXP5lvyRtpPVyW_h-Nz3aHkeBhJu-mFF4SyeQvum1qky2caaCcPOSPt7TSNBZ-mEjj111H1IyEYmkOaPOQCNLBPVTN_vmwGMenNPro-MxF_hFOFYtVRWAImFR_-zKCctuYWZPOwcYWd7Tg-ue_atNky4IsjFl4F6eK_uYifUEhqhrwVLZLBuv-hN3Z2b7Iy_uPIHf_O-2-By0aQYX-r18jUxOQbtzVI0xnb99Q8BsP8WptrNoL5VJH3Q__1Zmbuncd7znshQ_vwH7r5_UN1Z8_rlaglfruUCMQTrtIvUAodLX-21KJAiWKL4RA
30. Moses Kwadzo, **Michael K. Miyittah**, Delali B.K. Dovie, Richard K. Kosivi, Rebecca Owusu (2022). Pollution and climate change impacts on livelihood outcomes of lagoon fishermen in Central Region,

Ghana. *Current Research in Environmental Sustainability*. https://doi.org/10.1016/j.crsust.2022.100137

31. C.A. Faseyi, **M.K. Miyittah**, L. Yafetto, A.A. Sowunmi, G. Lutterodt (2022). Pollution fingerprinting of two southwestern estuaries in Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2022.e10337
32. Daniel Aja, **Michael K. Miyittah**, Donatus Bapentire Angnuureng (2022). Quantifying Mangrove Extent Using a Combination of Optical and Radar Images in a Wetland Complex, Western Region, Ghana. *Sustainability*. https://doi.org/10.3390/su142416687
33. **Michael K. Miyittah**, Richard K. Kosivi, Samuel Kofi Tulashie, Maxwell N. Addi, Josephine Y. Tawiah (2022). The need for alternative pest management methods to mitigate risks among cocoa farmers in the Volta region, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2022.e12591
34. C.A. Faseyi, **M.K. Miyittah**, A.A. Sowunmi, L. Yafetto (2022). Water quality and health risk assessments of illegal gold mining-impacted estuaries in Ghana. *Marine Pollution Bulletin*. https://doi.org/10.1016/j.marpolbul.2022.114277
35. Lydie-Stella Koutika, Maurício Rumenos Guidetti Zagatto, Arthur Prudêncio de Araujo Pereira, **Michael Miyittah**, Silvia Tabacchioni, Annamaria Bevivino, Cornelia Rumpel (2021). Does the Introduction of N2-Fixing Trees in Forest Plantations on Tropical Soils Ameliorate Low Fertility and Enhance Carbon Sequestration via Interactions Between Biota and Nutrient Availability? Case Studies From Central Africa and South America. *Frontiers in Soil Science*. https://doi.org/10.3389/fsoil.2021.752747
36. George Lutterodt, **Michael K. Miyittah**, Bright Addy, Ebenezer D.O. Ansa, Mohammed Takase (2021). Groundwater pollution assessment in a coastal aquifer in Cape Coast, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e06751
37. **Michael K. Miyittah**, Samuel Kofi Tulashie, Francis W. Tsyawo, Justice K. Sarfo, Archibald A. Darko (2020). Assessment of surface water quality status of the Aby Lagoon System in the Western Region of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2020.e04466
38. **Michael K. Miyittah**, Moses Kwadzo, Abigail Peprah Gyamfua, Daniel E. Dodor (2020). Health risk factors associated with pesticide use by watermelon farmers in Central region, Ghana. *ENVIRONMENTAL SYSTEMS RESEARCH*. https://doi.org/10.1186/s40068-020-00170-9
39. Andrews Obeng Affum, Shiloh Dede Osae, Edward Ebow Kwaansa-Ansah, **Michael K. Miyittah** (2020). Quality assessment and potential health risk of heavy metals in leafy and non-leafy vegetables irrigated with groundwater and municipal-waste-dominated stream in the Western Region, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2020.e05829
40. Daniel E. Dodor, Yahaya J. Amanor, Festus T. Attor, Thomas A. Adjadeh, Dora Neina, **Michael Miyittah** (2018). Co-application of biochar and cattle manure counteract positive priming of carbon mineralization in a sandy soil. *ENVIRONMENTAL SYSTEMS RESEARCH*. https://doi.org/10.1186/s40068-018-0108-y
41. Mohammed Takase, Alexander Nii Moi Pappoe, Ernest Amankwa Afrifa, **Michael Miyittah** (2018). High performance heterogeneous catalyst for biodiesel production from non-edible oil. *Renewable energy focus*. https://doi.org/10.1016/j.ref.2018.03.002
42. Daniel E. Dodor, **Michael Miyittah**, Benjamin D. K. Ahiabor (2018). Immobilized Laccase Mediator-Catalyzed Oxidation of Aqueous Mixtures of Polycyclic Aromatic Hydrocarbons. *Polycyclic aromatic compounds*. https://doi.org/10.1080/10406638.2018.1462210
43. Charles Y. Ansre, **Michael K. Miyittah**, Aba B. Andam, Daniel E. Dodor (2017). Risk assessment of radon in the South Dayi District of the Volta Region, Ghana. *Journal of Radiation Research and Applied Sciences*. https://doi.org/10.1016/j.jrras.2017.10.002
44. Graham K. Macdonald, Helen P. Jarvie, Paul J. A. Withers, Donnacha G. Doody, Bonnie L. Keeler, Philip M. Haygarth, Laura T. Johnson, Richard W. Mcdowell, **Michael K. Miyittah**, Stephen M. Powers, Andrew N. Sharpley, Jianbo Shen, Douglas R. Smith, Michael N. Weintraub, Tiequan Zhang (2016). Guiding phosphorus stewardship for multiple ecosystem services. *Ecosystem Health and Sustainability*. https://doi.org/10.1002/ehs2.1251
45. **Michael K. Miyittah**, Francis W. Tsyawo, Kingsley K. Kumah, Craig D. Stanley, Jack E. Rechcigl (2015). Suitability of Two Methods for Determination of Point of Zero Charge (PZC) of Adsorbents in Soils. *Communications in Soil Science and Plant Analysis*. https://doi.org/10.1080/00103624.2015.1108434

46. **Michael Miyittah** (2013). Proceedings of the 23rd Annual International Conference on Soil, Water, Energy & Air. *ENERGY & AIR*.
47. **Michael Miyittah**, Samuel Adiku (2013). Simulation Modeling of Arsenic Dynamics & Removal in Contaminated Groundwater. *https://www.aehsfoundation.org/conferenceproceedings*. https://www.academia.edu/download/60227447/Proceedings-WCC-2013.pdf#page=150
48. **Michael K Miyittah** (2012). Application of polymath chemical equilibrium simulation model for struvite precipitation in soils. *Water, Air, & Soil Pollution*. https://doi.org/10.1007/s11270-011-1000-9
49. **Michael K Miyittah** (2011). Developing a remediation strategy for phosphorus immobilization: effect of co-blending, Al-residual and Ca-Mg amendments in a manure-impacted spodosol. *Soil and Sediment Contamination*. https://doi.org/10.1080/15320383.2011.571310
50. **MK Miyittah** (2006). Phosphorus release from a manure-impacted spodosol: Effects of a water treatment residual. *Journal of environmental quality*. https://doi.org/10.2134/jeq2005.0139
51. **Michael Miyittah** (2003). Decomposition and CO2-C evolution of okara, sewage sludge, cow and poultry manure composts in soils. *Soil Science and Plant Nutrition*. https://doi.org/10.1080/00380768.2003.10409980
52. **M Miyittah** (2003). Reduction of phytotoxicity and maturation of okara [Tofu refuse] compost during decomposition. *Technical Bulletin of Faculty of Horticulture-Chiba University (Japan)*. https://agris.fao.org/search/en/providers/122558/records/647242db2c1d629bc979278b

Book chapters 1

1. Martin Opoku, Albert Koomson, Furkan Abubakar, **Michael Miyittah**, Emmanuel Acheampong (2023). Cadmium exposure experiments on calanoid copepods reveal significant shortfall in water quality criteria for managing coastal marine ecosystems in West Africa. *Journal of Coastal Conservation*. https://doi.org/10.1007/s11852-023-01009-y

Conference papers 1

1. **Michael Miyittah** (2013). Proceedings of the 23rd Annual International Conference on Soil, Water, Energy & Air. AEHS Foundation. *AEHS Foundation, Proceedings of the 23rd Annual International Conference on Soil, Water, Energy & Air. (Eds) Paul T. Kostecki, Edward J. Calabrese, Christopher M. Teaf, and David F. Ludwig*.

Theses 2

1. **Michael Miyittah** (2009). Tailoring/adapting Application of Sorbents for Phosphate Immobilization: Energetics and Simulation Modeling. *University of Florida*. https://scholar.google.com/scholar?cluster=10748372333679165877&hl=en&oi=scholarr
2. **Michael Miyittah** (2004). Phosphorus Immobilization in Manure-impacted Soil with Aluminum-based Drinking Water Treatment Residual. *University of Florida*. https://scholar.google.com/scholar?cluster=11454862673942560780&hl=en&oi=scholarr

Other publications 1

1. DE Dodor, **M Miyittah** (2020). Immobilized laccase mediator-catalyzed oxidation of aqueous mixtures of polycyclic aromatic hydrocarbons. *Polycyclic Aromatic Compounds*.