Bernard Fei-Baffoe

Department of Environmental Science
Kwame Nkrumah University of Science and Technology

ORCID 0000-0002-0200-3198 · Profile knust.peerford.com/staff/b6f5a66a-9aad-40da-9cdb-95eb229c42a9

RESEARCH

Areas: Pollution · Waste Management and Disposal · Building and Construction · Soil Science · Public Health, Environmental and Occupational Health · Biomedical Engineering

RESEARCH SUMMARY

63	1,586	19	28	2.63	14%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 63 publications listed below, 2013–2026. Field-weighted impact is the mean over the 63 works scored for it; 1.00 is the world average for works of the same field, type and year. 9 of the 63 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 62

1. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Kodwo Miezah, Yaw Amo Sarpong, Kwasi Obiri-Danso (2026). Composting as a catalyst for soil health and sustainability: A trend review. *Next research*.. https://doi.org/10.1016/j.nexres.2026.101478
2. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Kodwo Miezah, Yaw Amo Sarpong, Kwasi Obiri-Danso, Lyndon Nii Adjiri Sackey, Raymond Webrah Kazapoe (2026). Multidimensional modelling of compost quality integrating nutrient dynamics, energetics and pathogen inactivation. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2026.109821
3. Joe Steve Annan, Sulemana Alhassan, Jonathan Nartey Hogarh, **Bernard Fei Baffoe**, Samuel Kofi Tulashie (2026). Occupational exposure to solid aerosols in Ghana's large-scale gold mining sector: An assessment of legal gaps, compliance levels, and enforcement regulations. *Environmental Development*. https://doi.org/10.1016/j.envdev.2026.101541
4. Sefa Peprah, Patrick Addo-Fordjour, **Bernard Fei-Baffoe**, Kwadwo Boampong, Silas Wintuma Avicor, James Damsere-Derry (2025). Effects of pesticide application on soil bacteria community structure in a cabbage-based agroecosystem in Ghana. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0323936
5. **Bernard Fei-Baffoe**, Desmond Asare, Ebenezer Ebo Yahans Amuah, Alfredina Sangber-Dery, Lyndon Nii Adjiri Sackey, John Bentil, Douti Biyogue Nang, Raymond Webrah Kazapoe (2025). Potential use of Eragrostis curvula and Chromolaena odorata for phytoremediation on hydrocarbon-contaminated soil. *Total environment engineering*.. https://doi.org/10.1016/j.teengi.2025.100023
6. Emma Kofua Nsafoah, Cindy Yaa Gyeniaw, Alhassan Sulemana, **Bernard Fei-Baffoe**, David Azanu, Kodwo Miezah, Kofi Sekyere Boateng, Daniel Nimako Amprako, Jonathan Nartey Hogarh, Kwame Ohene Buabeng (2025). Relationship Between Physicochemical Parameters and Risk of Analgesics and Antibiotics of Effluents From Three Selected Hospitals in Kumasi Metropolis, Ghana. *The Scientific World JOURNAL*. https://doi.org/10.1155/tswj/2891425
7. Ebenezer Ebo Yahans Amuah, Solomon Nandomah, Nang Biyogue Douti, **Bernard Fei-Baffoe**, Raymond Webrah Kazapoe, John Bentil (2025). Reviewing the performance of environmental policies in addressing environmental and socio-economic issues and associated implementation challenges: Ghana's perspective. *Environmental Development*. https://doi.org/10.1016/j.envdev.2025.101288
8. John Bentil, Sadillan Sadiq Abubakar, Yaw Prince Michael Obidieh, Justice Tutu Osei, Ebenezer Ebo

Yahans Amuah, **Bernard Fei-Baffoe**, Raymond Webrah Kazapoe (2025). Sustainable biodiesel production from palm oil mill effluent: Assessing feasibility and environmental impacts. *Total environment engineering*.. https://doi.org/10.1016/j.teengi.2025.100024

9. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Kodwo Miezah, Yaw Amo Sarpong, Kwasi Obiri-Danso (2025). Synergistic assessment of compost quality using a multifaceted approaches and machine learning: A research protocol. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2025.105786
10. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Lyndon Nii Adjiri Sackey, Raymond Webrah Kazapoe, Douti Biyogue Nang, Paul Dankwa, Benjamin Offei, John Bentil (2025). Tracing potentially toxic elements and nutrient levels from extensive illegal mining using multivariate statistics, pollution indices and ecological assessments. *Environmental Nanotechnology Monitoring & Management*. https://doi.org/10.1016/j.enmm.2025.101043
11. Nana Kwame Boateng, **Bernard Fei-Baffoe**, Lyndon N.A. Sackey, Albert Banunle (2025). Using Bahia and Bermuda Grass to Remediate Municipal Solid Waste Leachate Under Hydroponic Condition. *Environmental Monitoring and Assessment*. https://doi.org/10.1007/s10661-025-14218-9
12. Lyndon N. A. Sackey, Joel Abugre, **Bernard Fei-Baffoe**, Ebenezer Y. E. Amuah, Richmond Yeboah Amoako (2024). Assessment of Noise Levels of Churches in the Kpone Katamanso Municipal Assembly in Ghana. *The Scientific World JOURNAL*. https://doi.org/10.1155/2024/6674297
13. Lyndon N.A. Sackey, Nicholas Twum, Anthony Boakye Antwi, **Bernard Fei-Baffoe** (2024). Assessment of toxic elements in selected fish species in the marine water at Jamestown, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e32387
14. **Bernard Fei-Baffoe**, Esther Badu, Kwodwo Miezah, Lyndon Nii Adjiri Sackey, Alhassan Sulemana, Ebenezer Ebo Yahans Amuah (2024). Contamination of groundwater by petroleum hydrocarbons: Impact of fuel stations in residential areas. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e25924
15. Samuel Kumi, Patrick Addo-Fordjour, **Bernard Fei-Baffoe**, Abena Owusu Adjapong, Francis Boafo Asamoah (2024). Dynamic influence of mining-induced land use land cover changes on avifauna community over a mining landscape, Ghana. *Trees Forests and People*. https://doi.org/10.1016/j.tfp.2024.100515
16. **Bernard Fei-Baffoe**, Kofi Adu Dankwah, Alfredina Sangber-Dery, Ebenezer Ebo Yahans Amuah, Lyndon Nii-Adjiri Sackey (2024). Evaluation and implications of organophosphate pesticide residues in cabbage (Brassica oleracea). *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e34279
17. **Bernard Fei-Baffoe**, Ernestina Gawu, Ebenezer Ebo Yahans Amuah, Alfredina Sangber-Dery, Lyndon Nii Adjiri Sackey, Nang Biyogue Douti (2024). Organochlorine and organophosphate residues in lettuce and green pepper in Ghana's mega city. *Case Studies in Chemical and Environmental Engineering*. https://doi.org/10.1016/j.cscee.2024.101072
18. **Bernard Fei-Baffoe**, Ebenezer Ebo Yahans Amuah, Ebenezer Laryea Annan, Alhassan Sulemana, Lyndon Nii Adjiri Sackey, Kwodwo Miezah, John Bentil, Douti Biyougue Nang, Raymond Webrah Kazapoe (2024). Synergistic use of cattle bile, compost and fertilizer amendments in enhancing the bioremediation of hydrocarbon-contaminated soils. *Cleaner and Circular Bioeconomy*. https://doi.org/10.1016/j.clcb.2024.100116
19. Rapheal Nsiah-Gyambibi, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, **Bernard Fei-Baffoe** (2024). Valorization of Fecal Sludge Stabilization via Vermicomposting in Microcosm-Enriched Substrates Using Organic Plant-Derived Materials and Agricultural Soil for Compost Production. *Compost Science & Utilization*. https://doi.org/10.1080/1065657x.2024.2368224
20. Albert Banunle, **Bernard Fei-Baffoe**, Kodwo Miezah, Nana Ewusi-Mensah, Uffe Jørgensen, Robert Aidoo, Alice Amoah, Patrick Addo-Fordjour, Robert Clement Abaidoo (2023). Economic Viability Assessment of Small-Scale Biomass Composting Project Within a Developing Country Context. *Circular Economy and Sustainability*. https://doi.org/10.1007/s43615-023-00328-4
21. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Raymond Webrah Kazapoe, Paul Dankwa, Isaac Kwaku Okyere, Lyndon Nii Adjiri Sackey, Douti Biyogue Nang, Prosper Kpiebaya (2023). From the ground up: Unveiling Ghana's soil quality crisis and its ecological and health implications. *Innovation and Green*

Development. https://doi.org/10.1016/j.igd.2023.100097

22. Samuel Kumi, Patrick Addo-Fordjour, **Bernard Fei-Baffoe** (2023). Mining-induced changes in ecosystem services value and implications of their economic and relational cost in a mining landscape, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e21156
23. Gloria Addae, Sampson Oduro-Kwarteng, **Bernard Fei-Baffoe**, Mizpah Ama Dziedzorm Rockson, Edward Antwi, Joseph Xavier Francisco Ribeiro (2023). Patterns of waste collection: A time series model for market waste forecasting in the Kumasi Metropolis, Ghana. *Cleaner Waste Systems*. https://doi.org/10.1016/j.clwas.2023.100086
24. Albert Banunle, **Bernard Fei-Baffoe**, Kodwo Miezah, Nana Ewusi-Mensah, Uffe Jørgensen, Robert Aidoo, Alice Amoah, Patrick Addo-Fordjour, Robert Clement Abaidoo (2023). Valorisation of Biowaste and Aquatic Invasive Plants Through Compost Production for Agricultural Use. *Waste and Biomass Valorization*. https://doi.org/10.1007/s12649-023-02119-2
25. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Lyndon Nii Adjiri Sackey, Nang Biyogue Douti, Raymond Webrah Kazapoe (2022). A review of the principles of composting: understanding the processes, methods, merits, and demerits. *Organic Agriculture*. https://doi.org/10.1007/s13165-022-00408-z
26. Nana Aboagye Acheampong, William Gariba Akanwariwiak, Moses Mensah, **Bernard Fei-Baffoe**, Felix Offei, Joseph Asankomah Bentil, Abubakari Zarouk Imoro, Lawrence Sheringham Borquaye (2022). Conversion of cassava peels into bioethanol using the OSTEP approach. *Biomass Conversion and Biorefinery*. https://doi.org/10.1007/s13399-021-02149-7
27. Stephen Sodoke, Ebenezer Ebo Yahans Amuah, Agbo Joseph, Jeff DaCosta Osei, Nang Biyogue Douti, **Bernard Fei-Baffoe**, Kwame Anokye (2022). Market-based waste segregation and waste bin siting suitability studies using GIS and multi-criteria evaluation in the Kumasi Metropolis. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2022.100655
28. Joseph Albert Quarm, Alexander Kofi Anning, **Bernard Fei-Baffoe**, Veronica Frempomaa Siaw, Ebenezer Ebo Yahans Amuah (2022). Perception of the environmental, socio-economic and health impacts of artisanal gold mining in the Amansie West District, Ghana. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2022.100653
29. MacDonald Kitson-Hytey, **Bernard Fei-Baffoe**, Lyndon N. A. Sackey, Kodwo Miezah (2022). Production of bioethanol from plantain and yam peels using Aspergillus niger and Saccharomyces cerevisiae. *Biomass Conversion and Biorefinery*. https://doi.org/10.1007/s13399-022-03352-w
30. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Lyndon Nii Adjiri Sackey, Paul Dankwa, Douti Biyogue Nang, Raymond Webrah Kazapoe (2022). Remediation of mined soil using shea nut shell (Vitellaria paradoxa) as an amendment material. *Journal of environmental chemical engineering*. https://doi.org/10.1016/j.jece.2022.108598
31. Samuel Kojo Abanyie, Ebenezer Ebo Yahans Amuah, Nang Biyogue Douti, Michael Noah Antwi, **Bernard Fei-Baffoe**, Charles Casmed Amadu (2022). Sanitation and waste management practices and possible implications on groundwater quality in peri-urban areas, Doba and Nayagenia, northeastern Ghana. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2022.100546
32. Daniel Osei-Twumasi, Alexander Kofi Anning, **Bernard Fei-Baffoe**, Kwabena Owusu Danquah (2022). Suitability and economic viability of bioremediated hydrocarbon-contaminated drill mud waste for cultivation of selected food crops. *Environmental Technology & Innovation*. https://doi.org/10.1016/j.eti.2022.102705
33. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Lyndon Nii Adjiri Sackey, Nang Biyogue Douti, Raymond Webrah Kazapoe (2022). Understanding the distribution, source-pattern and geochemical controls of soils in an artisanal mine site during a ban on illegal mining activities: Is a ban an absolute solution? *Soil Security*. https://doi.org/10.1016/j.soisec.2022.100078
34. Rapheal Nsiah-Gyambibi, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, **Bernard Fei-Baffoe** (2022). Vermistabilization of fecal sludge with organic enriched substrates for compost production using two earthworm species (Eisenia foetida and Eudrilus eugeniae). *Environmental Quality Management*. https://

doi.org/10.1002/tqem.21852

35. Ebenezer Ebo Yahans Amuah, Edna Pambour Agyemang, Paul Dankwa, **Bernard Fei-Baffoe**, Raymond Webrah Kazapoe, Nang Biyogue Douti (2021). Are used face masks handled as infectious waste? Novel pollution driven by the COVID-19 pandemic. *Resources Conservation & Recycling Advances*. https://doi.org/10.1016/j.rcradv.2021.200062

36. Ebenezer Ebo Yahans Amuah, **Bernard Fei-Baffoe**, Raymond Webrah Kazapoe (2021). Emerging potentially toxic elements (strontium and vanadium) in Ghana's pedological studies: Understanding the levels, distributions and potential health implications. A preliminary review. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2021.100235

37. A. J. Nyantakyi, S. Wiafe, O. Akoto, **Bernard Fei-Baffoe** (2021). Heavy Metal Concentrations in Fish from River Tano in Ghana and the Health Risks Posed to Consumers. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2021/5834720

38. Prince Junior Asilevi, Patrick Boakye, Sampson Oduro-Kwarteng, **Bernard Fei-Baffoe**, Yen Adams Sokama-Neuyam (2021). Indoor air quality improvement and purification by atmospheric pressure Non-Thermal Plasma (NTP). *Scientific Reports*. https://doi.org/10.1038/s41598-021-02276-1

39. Samuel Kumi, Patrick Addo-Fordjour, **Bernard Fei-Baffoe**, Ebenezer J.D. Belford, Yaw Ameyaw (2021). Land use land cover dynamics and fragmentation-induced changes in woody plant community structure in a mining landscape, Ghana. *Trees Forests and People*. https://doi.org/10.1016/j.tfp.2021.100070

40. **Bernard Fei-Baffoe**, Jeffery Amo-Asare, Alhassan Sulemana, Kodwo Miezah (2021). Levels of Lead, Copper, and Zinc in Cabbage (Brassica oleracea sp.) and Lettuce (Lactuca sativa sp.) Grown on Soil Amended with Sewage Sludge. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2021/8386218

41. Gloria Addae, Sampson Oduro-Kwarteng, **Bernard Fei-Baffoe**, Mizpah Ama Dziedzorm Rockson, Joseph Xavier Francisco Ribeiro, Edward Antwi (2021). Market waste composition analysis and resource recovery potential in Kumasi, Ghana. *Journal of the Air & Waste Management Association*. https://doi.org/10.1080/10962247.2021.1969296

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45. Daniel Osei-Twumasi, **Bernard Fei-Baffoe**, Alexander Kofi Anning, Kwabena Owusu Danquah (2020). Biodegradation of Hydrocarbon-Contaminated Drill Mud Waste with Compost and Cow Bile. *Environmental Processes*. https://doi.org/10.1007/s40710-020-00464-1

46. Maxwell Jnr Opoku, **Bernard Fei-Baffoe** (2020). Biogas Production from Biodegradable Kitchen Waste Generated on University of Science and Technology Campus, Ghana. *Journal of environment and earth science*. https://doi.org/10.7176/jees/10-7-04

47. Jackson Adiyiah Nyantakyi, **Bernard Fei-Baffoe**, Osei Akoto (2020). Seasonal Variations in Physicochemical and Nutrient Water Quality of River Tano in Ghana. *International Journal of Environmental Chemistry*. https://doi.org/10.11648/j.ijec.20200401.11

48. Daniel Osei-Twumasi, **Bernard Fei-Baffoe**, Alexander Kofi Anning, Kwabena Owusu Danquah (2020). Synergistic effects of compost, cow bile and bacterial culture on bioremediation of hydrocarbon-contaminated drill mud waste. *Environmental Pollution*. https://doi.org/10.1016/j.envpol.2020.115202

49. Michael Kaamo Ayaim, **Bernard Fei-Baffoe**, Alhassan Sulemana, Kodwo Miezah, Festus Adams (2019). Potential sites for landfill development in a developing country: A case study of Ga South Municipality, Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2019.e02537

50. A. J. Nyantakyi, O. Akoto, **B. Fei-Baffoe** (2019). Seasonal variations in heavy metals in water and sediment samples from River Tano in the Bono, Bono East, and Ahafo Regions, Ghana. *Environmental Monitoring and Assessment*. https://doi.org/10.1007/s10661-019-7744-1

51. Sakyi, Frederick Kwame, **Fei-Baffoe, Bernard** (2018). A GIS – BASED FLOOD RISK MAPPING: A CASE STUDY IN PRU DISTRICT OF GHANA. *HAL (Le Centre pour la Communication Scientifique Directe)*.

52. S. Antwi-Akomeah, **Bernard Fei-Baffoe**, Ebenezer J. D. Belford, Paul Osei-Fosu (2018). Biostimulation of Immobilized Microbes in a Fixed-Bed Bioreactor towards Hydrocarbon-Contaminated Water Remediation Using Compost Tea and Egg Shell Powder.

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56. Christian Bosompem, Eric Stemn, **Bernard Fei-Baffoe** (2016). Multi-criteria GIS-based siting of transfer station for municipal solid waste: The case of Kumasi Metropolitan Area, Ghana. *Waste Management & Research The Journal for a Sustainable Circular Economy*. https://doi.org/10.1177/0734242x16658363

57. Kodwo Miezah, Kwasi Obiri-Danso, Zsófia Kádár, Stefan Heiske, **Bernard Fei-Baffoe**, Moses Mensah, Anne S. Meyer (2016). Municipal Solid Waste Management in a Low Income Economy Through Biogas and Bioethanol Production. *Waste and Biomass Valorization*. https://doi.org/10.1007/s12649-016-9566-5

58. Osei Akoto, Divine Addo, Elvis Baidoo, Eric A. Agyapong, Joseph Apau, **Bernard Fei-Baffoe** (2015). Heavy metal accumulation in untreated wastewater-irrigated soil and lettuce (Lactuca sativa). *Environmental Earth Sciences*. https://doi.org/10.1007/s12665-015-4640-z

59. Eugene Atta Nyankson, **Bernard Fei-Baffoe**, John Gorkeh-Miah (2015). Household solid waste generation rate and physical composition analysis: case of Sekondi-Takoradi Metropolis in the western region, Ghana. *International Journal of Environment*. https://doi.org/10.3126/ije.v4i2.12644

60. Kodwo Miezah, Kwasi Obiri-Danso, Zsófia Kádár, **Bernard Fei-Baffoe**, Moses Y. Mensah (2015). Municipal solid waste characterization and quantification as a measure towards effective waste management in Ghana. *Waste Management*. https://doi.org/10.1016/j.wasman.2015.09.009

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62. **Bernard Fei-Baffoe**, Godsgood K. Botwe-Koomson, Isaac Fimpong Mensa-Bonsu, Eric Appiah Agyapong (2013). Impact of ISO 14001 Environmental Management System on Key Environmental Performance Indicators of Selected Gold Mining Companies in Ghana. *Journal of Waste Management*. https://doi.org/10.1155/2013/935843

Conference papers 1

1. D. Osei-Twumasi, **B. Fei-Baffoe**, L. Darkwah, F. Adomako, D. A. Boateng, W. B. Johnson, R. Yartel, K. Ennin (2016). Pilot Plant Bioremediation of Hydrocarbon Contaminated Drill Mud - Case Study in Ghana. https://doi.org/10.2118/183592-ms