Albert Banunle

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PROFILE

Albert Banunle is an environmental scientist and a circular economy specialist. My research focuses on (i) waste management and valorisation from a circular economy perspective; (ii) pro-environmental behaviour and sustainability-oriented innovations, and (iii) the nexus between the environment and agriculture as well as human security.

RESEARCH

Interests	Waste Management · Climate change · Pro-environmental behaviour · Environment-Security nexus · Circular bioeconomy · Sustainability · Environmental governance · Agriculture
Areas	Waste Management and Disposal · Pollution · Ecology · Environmental Chemistry · General Agricultural and Biological Sciences · Business and International Management

RESEARCH SUMMARY

21	264	8	6	1.41	18%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 21 publications listed below, 2017–2026. Field-weighted impact is the mean over the 11 works scored for it; 1.00 is the world average for works of the same field, type and year. 2 of the 11 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Lecturer 2023–present
Department of Environmental Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

MSC ENVIRONMENTAL PARTNERSHIP MANAGEMENT 2020–2021
University of Aberdeen, Aberdeen, United Kingdom

PhD 2018–2023
Environmental Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

M.Sc. Environmental Science 2014–2017
Department of Theoretical and Applied Biology, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

The Institution of Environmental Sciences
London, United Kingdom

PUBLICATIONS

Journal articles 20

1. Lydia Otoo Amponsah, David Nartey Obemah, Belinda Lee Quayson, **Albert Banunle**, Daniel Kwame Oware Asamoah, Mwema Felix Mwema (2026). On-farm wastewater treatment for irrigation using biochar from local agro-residues in Obuasi, Ghana. *PLOS Water*. https://doi.org/10.1371/journal.pwat.0000612
2. Felix KPENEKUU, Philip ANTWI-AGYEI, Fred NIMOH, Andrew DOUGILL, **Albert BANUNLE**, Jonathan ATTA-AIDOO, Frank BAFFOUR-ATA, Thomas Peprah AGYEKUM, Godfred ADDAI, Lawrence GUODAAR (2025). Cost and benefit analysis of Climate-Smart Agriculture interventions in the dryland farming systems of northern Ghana. *Regional Sustainability*. https://doi.org/10.1016/j.regsus.2025.100196
3. **A Banunle** (2025). Interactive effect of anthropogenic activities and seasonal changes on the biophysicochemical properties and heavy metal status of tropical surface water resources. *Scientific African*. https://www.sciencedirect.com/science/article/pii/S246822762400437X
4. **Albert Banunle**, Felix Kpenekuu (2025). Socioecological Factors and Practical Challenges to the Adoption of Circular Agriculture and Agroecological Techniques By Climate-Vulnerable Farmers. *Circular Economy and Sustainability*. https://doi.org/10.1007/s43615-025-00630-3
5. **A Banunle** (2025). Understanding the Nexus Between Illegal Exploitation of Natural Resources and Terrorism Financing in Africa. *African Journal of Terrorism*.
6. 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
7. Richard Osei Ampong, Kodwo Miezah, **Albert Banunle**, Ebenezer Ebo Yahans Amuah, Ebenezer Gyampoh Amoah (2024). Comparative analysis of the effectiveness and efficiency of formal and informal waste collectors in urban waste management system. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e39017
8. Josephine Amankwa, Lawrence Damnyag, **Albert Banunle** (2024). Determinants of forest law compliances among inhabitants of local communities surrounding tropical wildlife and forest reserve in Ghana. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2024.140964
9. **Albert Banunle** (2024). Determinants of pro-environmental behaviour of urban youth in Ghana. *Environment Development and Sustainability*. https://doi.org/10.1007/s10668-024-04480-1
10. **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
11. **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
12. **Albert Banunle**, Bernard Fei-Baffoe, Kodwo Miezah, Nana Ewusi-Mensah, Uffe Jørgensen, Robert Aidoo, Alice Amoah, Robert Clement Abaidoo, Alex Amerh Agbeshie (2021). Utilisation potentials of invasive plants in the Owabi dam in the Ashanti region of Ghana. *BioResources*. https://doi.org/10.15376/biores.16.2.3075-3095
13. Alex Amerh Agbeshie, Rita Adjei, Joseph Anokye, **Albert Banunle** (2020). Municipal waste dumpsite: Impact on soil properties and heavy metal concentrations, Sunyani, Ghana. *Scientific African*. https://doi.org/10.1016/j.sciaf.2020.e00390
14. Augustina Angelina Sylverken, B Arko-Boham, Elvis O Ameyaw, **A Banunle**, Robert P Biney, Evans Asenso, Isaac T Henneh, Ama K Thomford, Madison Adanusa (2020). Scientific African. *Carbon*. https://www.researchgate.net/profile/Hamza-Zine/publication/346551011_Guidelines_for_a_phytomanagement_plan_by_the_phytostabilization_of_mining_wastes/

links/5fcfd13392851c00f85f0f28/Guidelines-for-a-phytomanagement-plan-by-the-phytostabilization-of-mining-wastes.pdf

15. **A Banunle** (2019). Effect of RTIMP's commercialisation of cassava on household food security in the Cape Coast Metropolis in the central region of Ghana. *Agricultural and Food Science Journal of Ghana*. https://www.researchgate.net/profile/Kingsley-Otchere/publication/339847746_Effect_of_RTIMP's_commercialisation_of_cassava_on_household_food_security_in_the_Cape_Coast_Metropolis_in_the_central_region_of_Ghana/links/5f6350eba6fdcc00862744b3/Effect-of-RTIMPs-commercialisation-of-cassava-on-household-food-security-in-the-Cape-Coast-Metropolis-in-the-central-region-of-Ghana.pdf

16. **A Banunle** (2019). Environmental and natural resources consequences of arm conflict and violent extremism in Sahelian Countries in Africa. *African Journal on Terrorism*. https://www.researchgate.net/profile/Charles-Ekpo/publication/338956021_Explaining_the_Resurgence_of_Biafra_Radicalisation_and_Nationalism_in_South-East_Nigeria/links/5e352223458515072d740b80/Explaining-the-Resurgence-of-Biafra-Radicalisation-and-Nationalism-in-South-East-Nigeria.pdf#page=83

17. **A Banunle** (2019). Terrorism, violent extremism and insurgency in the Sahel region: An assessment. *on Terrorism*. https://www.researchgate.net/profile/Albert-Banunle/publication/341540151_Environmental_and_Natural_Resources_Consequences_Of_Arm_Conflict_And_Violent_Extremism_In_Sahelian_Countries_in_Africa/links/60470974a6fdcc9c7821a017/Environmental-and-Natural-Resources-Consequences-Of-Arm-Conflict-And-Violent-Extremism-In-Sahelian-Countries-in-Africa.pdf#page=12

18. **A Banunle** (2018). Analysis of Boko Haram Terrorism as an Emerging Security Threat in Western Sahel; Nigeria in Focus. *African Journal for the Prevention and Combating of Terrorism*. https://scholar.google.com/scholar?cluster=9646749821447587015&hl=en&oi=scholarr

19. **A Banunle** (2018). Determination of the physico-chemical properties and heavy metal status of the Tano river along the catchment of the Ahafo mine in the BrongAhafo region of Ghana. *Journal of Environmental & Analytical Toxicology*. https://www.academia.edu/download/117720837/determination-of-the-physicochemical-properties-and-heavy-metal-statusof-the-tano-river-along-the-catchment-of-the-ahafo-mine-in-t-2161-.pdf

20. **Albert Banunle** (2017). Trend analysis of Students' Admission, Enrolment and Completion in KNUST Distance Learning Postgraduate Programmes. *Journal of Education and Human Development*. https://www.academia.edu/download/95841689/064d273eff17f1df2ac2eb2909d11d7a84aa.pdf

Reports 1

1. **A Banunle** (2021). Preparedness and resilience of education systems to address multiple threats: Pandemics, hurricanes, drought, food insecurity. *Commonwealth Secretariat*. https://scholar.google.com/scholar?cluster=6286989611216884443&hl=en&oi=scholarr