Samuel Nketia Boateng

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PROFILE

Samuel Nketia Boateng is a Teaching and Research Laboratory Technologist at the Department of Civil and Environmental Engineering, School of Sustainable Engineering, University of Cape Coast. He obtained his Bachelor's Degree in Laboratory Technology and his Master's in Environmental Science from the University of Cape Coast. Since 2018, Samuel has been working in the Water and Environmental Quality (WEQ) Laboratory, a facility funded under the NUFFIC/NICHE project. He has demonstrated the ability to manage laboratories under strict safety standards and has leveraged modern equipment for advanced environmental analysis.He has extensive knowledge in water and wastewater quality analysis, Data analysis and expert in Laboratory organization, disinfection by products, Use of UV-Vis spectrophotometer, GC-MS, AAS, HPLC and rich experience in Biogas research. He also has rich data analysis skills especially with Origin Pro, SPSS, STATA and how to conduct bibliometric analysis. Over the years, he has trained nearly 50 interns and National Service personnel in water and environmental quality analysis. Currently, he supervises the day-to-day administration of the WEQ Lab while also supporting teaching and research. Samuel has co-authored multiple academic papers, providing extensive technical expertise that contributed to the success and completion of significant research findings. His research interests mainly focus on waste-to-energy, wastewater treatment, groundwater and river water quality monitoring, desalination technologies, nutrient remediation, WASH, identification and remediation of emerging environmental contaminants (PFAs, DBPs, pharmaceuticals, endocrine disruptors, etc.), and wetland management. He has published in reputable peer-reviewed journals such as Springer Journal of Wetlands, Egyptian Academic Journal of Biological Sciences (Acad. J. Biolog. Sci.), and Open Access Library Journal

RESEARCH

Interests	Anaerobic Digestion · Water and wastewater treatment · Emerging Contaminants · Desalination · WASH · Water quality analysis and Disinfection PBC · Waste to Energy nexus
Areas	Building and Construction · Waste Management and Disposal · Global and Planetary Change · Water Science and Technology · Analytical Chemistry · Biomedical Engineering

RESEARCH SUMMARY

11	11	2	0	0.91	11%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 11 publications listed below, 2023–2026. Field-weighted impact is the mean over the 9 works scored for it; 1.00 is the world average for works of the same field, type and year. 1 of the 9 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Laboratory Manager 2024–present
Civil and Environmental Engineering, University of Cape Coast, Cape Coast, Ghana

Laboratory Technologist 2020–present
Water and Sanitation Department, University of Cape Coast School of Agriculture, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

Bsc Laboratory Technology
Department of Laboratory Technology, University of Cape Coast, Cape Coast, Ghana

Masters of Philosophy Environmental Science 2023–2025
Environmental Science, University of Cape Coast, Cape Coast, Ghana

PUBLICATIONS

Journal articles 11

1. **Samuel Nketia Boateng**, Leslie Sarfo Gyamfi, Christina Antwi, Samuel Duku, Prince Kwesi Yeboah-Danso, Gertrude Oboh, Wilfred Okrah, Alimatu Awagah, Albert Ebo Duncan (2026). A multi-criteria review and geospatial analyses for air conditioner (AC) condensate water reuse. *Discover Water*. https://doi.org/10.1007/s43832-026-00381-8
2. Richard Arthur, **Samuel Nketia Boateng**, Isaac Mbir Bryant, Martina Francisca Baidoo, Paul A. Scherer (2026). Analytical Techniques for Heavy Metal Monitoring in Environmental Samples Related to Biogas Producing Systems: A Multi-Criteria Review. *Critical Reviews in Analytical Chemistry*. https://doi.org/10.1080/10408347.2026.2684627
3. **Samuel Nketia Boateng**, Richard Arthur, Isaac Mbir Bryant, Martina Francisca Baidoo, Joshua Hayford Nyarko (2026). Biogas Production from Mechanically Pretreated Rice Husk and Cow Paunch Content – Part 1: Experimental Performance of Co-Digestion System. *Waste Management & Research The Journal for a Sustainable Circular Economy*. https://doi.org/10.1177/0734242x261472601
4. Isaac Mbir Bryant, **Samuel Nketia Boateng**, Richard Arthur, Martina Francisca Baidoo (2026). Characterization and gaussian process modelling of cow paunch content and mechanically pretreated rice husk co-substrates for enhanced biogas production. *Journal of Material Cycles and Waste Management*. https://doi.org/10.1007/s10163-026-02567-7
5. **Samuel Nketia Boateng**, Emmanuel Cobbinah, Gertrude Oboh, Samuel Asiamah Obiri, Obed Adarkwah-Yiadom, Isaac Mbir Bryant (2026). In silico investigation of pretreatment-derived inhibitors on multiple methanogenic enzymes in anaerobic digestion: Molecular-level insights. *Cleaner Chemical Engineering*. https://doi.org/10.1016/j.clce.2026.100230
6. **Samuel Nketia Boateng** (2026). Integrating Artificial Intelligence and Mixed-Methods Research: A Framework for Enhancing Data Analysis and Interpretation in Environmental Science. *AI in Sustainable Energy and Environment*. https://aisesjournal.com/article-1-30-en.html
7. **Samuel Nketia Boateng**, Felicia Takyi, Gertrude Oboh, Harriet Kyerewaah Ampoful, Josephine Kuttor, Albert Ebo Duncan (2026). Multivariate analysis of air pollution and associated potential respiratory health risks in urban areas of the Southeast Asian region and Africa. *Journal of Air Pollution and Health*. https://doi.org/10.18502/japh.v11i1.21270
8. **Samuel Boateng** (2025). "One Corner": Popular music, improvisation, and echoes of a moral panic in Ghana. *African Music: Journal of the International Library of African Music*. https://journal.ru.ac.za/index.php/africanmusic/article/view/3037
9. Emmanuel U. Osisiogu, **Samuel N. Boateng**, Bhavana Singh, Patrick. K. Feglo, Kwabena. O. Duedu (2024). Physicochemical Properties of Water Samples in the Volta Region of Ghana: Implications for Public Health. *Egyptian Academic Journal of Biological Sciences. C, Physiology and Molecular Biology/Egyptian Academic Journal of Biological Sciences. C, Physiology and Molecular Biology*. https://doi.org/10.21608/eajbsc.2024.375165
10. Albert Ebo Duncan, Sara Pennellini, Samuel Barnie, Martha Osei-Marfo, **Samuel Nketia Boateng**, Alessandra Bonoli (2023). Assessing the sustainable management of Coastal Wetlands in Developing Economies: A Case Study on the Iture-Abakam Natural Wetland in Cape Coast, Ghana. *Wetlands*. https://doi.org/10.1007/s13157-023-01743-x
11. Albert Ebo Duncan, Samuel Barnie, Martha Osei-Marfo, **Samuel Nketia Boateng**, George Acquaah, Gertrude Oboh (2023). Water Quality Monitoring in the Pra Basin of Ghana. *OALib*. https://doi.org/

10.4236/oalib.1110173