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RESEARCH

Interests	Organic · Natural Products Chemistry
Areas	Food Science · Plant Science · Forestry · Biochemistry · Molecular Biology · Pollution

RESEARCH SUMMARY

44	653	15	23	2.69	15%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 44 publications listed below, 2010–2026. Field-weighted impact is the mean over the 33 works scored for it; 1.00 is the world average for works of the same field, type and year. 5 of the 33 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2007–present
Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD/Dr. 2012–2015
Organic Chemistry, Kwame Nkrumah University of Science and Technology Department of Chemistry, Kumasi, Ghana

PUBLICATIONS

Journal articles 43

1. Leticia Dassah Guba, Nathaniel Owusu Boadi, Selina Ama Saah, Eric Agorku Selorm, **Mercy Badu**, Harry Okyere, Nii Korley Kortei (2026). Human Health Risk Assessment of Heavy Metals in Muscle, Liver, Bone, and Lard from Pork Samples Obtained in Ghana. *Chemistry Africa*. https://doi.org/10.1007/s42250-025-01576-7
2. Akua Gyamfi, De-youngster Wereko Brobbey, Michael Konney Laryea, **Mercy Badu**, Isaac Asiamah, Lawrence Sheringham Borquaye (2026). Nanoemulsification of Cleistopholis patens and Vitex simplicifolia essential oils enhances antimicrobial action and ciprofloxacin synergy. *Pharmacological Research - Natural Products*. https://doi.org/10.1016/j.prenap.2026.100555
3. Linda Mensah Sarpong, Akwasi Acheampong, **Mercy Badu**, Jibira Yakubu, Kennedy Ameyaw Baah, Silas Adjei, Emmanuel Quaye Kontoh, Joseph Adusei-Sarkodie, Isaac Kingsley Amponsah, Samuel Oppong Bekoe (2026). Zanthoxylum rhetsa Metabolites Demonstrate Potent Anti-Prostate Cancer Activity: Insights From in Vitro Screening and Molecular Docking Study. *Chemistry Africa*. https://doi.org/10.1007/s42250-026-01687-9
4. Linda Mensah Sarpong, Akwasi Acheampong, **Mercy Badu**, Silas Adjei, Jibira Yakubu, Kennedy Ameyaw Baah, Joseph Adusei Sarkodie, Isaac Kingsley Amponsah (2025). Anti-Prostatic Carcinoma Activity of Entandrophragma angolense and Methyl Angolensate: In Vitro and In Silico Analyses. *Natural Product Communications*. https://doi.org/10.1177/1934578x251384534

5. Richard Tsiwah Cobbinah, Nathaniel Owusu Boadi, Selina Ama Saah, Eric Selorm Agorku, **Mercy Badu**, Nii Korley Kortei (2025). Cancer risk from heavy metal contamination in fish and implications for public health. *Scientific Reports*. https://doi.org/10.1038/s41598-025-08488-z

6. Akua Gyamfi, Randolf Benle, Michael Konney Laryea, **M Badu**, Lawrence Sheringham Borquaye (2025). Essential Oil Emulsions from Xylopia Villosa and Hyparrhena Rufa as Potent Antimicrobial and Antibiofilm Agents. *Chemistry Africa*. https://doi.org/10.1007/s42250-025-01459-x

7. Emmanuel Azanlerigo, Philip T. Thompson, Cephas Kanati, **Mercy Badu** (2025). Ethnobotanical Study of Indigenous Knowledge on Medicinal Plants Used in the Talensi District of the Upper East Region of Ghana. *Open Research Africa*. https://doi.org/10.12688/openresafrica.15807.2

8. Charles Kwame Bandoh, Moro Haruna, David Adu-Poku, Bernice Yram Danu, Ophelia Pinto, Mandela Toku, **Mercy Badu**, Eric Selorm Agorku, Francis Kofi Ampong, Robert Kwame Nkum (2025). Gd-doped ZnO-g-C3N4 nanocomposite: a novel photocatalyst for the photodegradation of eosin yellow dye in water. *Discover Applied Sciences*. https://doi.org/10.1007/s42452-025-06759-y

9. **Mercy Badu**, Philip T. Thompson, Vivian E. Boamah (2025). In vivo anti-inflammatory activity, acute toxicity profiling, and sub-acute toxicity profiling of extracts from the fruit pulp and seeds of african baobab (Adansonia digitata L.). *Scientific African*. https://doi.org/10.1016/j.sciaf.2025.e02615

10. Emmanuel Mensah, Abigail Donkor, **Mercy Badu** (2025). Investigating the nutritional, antioxidant and antimicrobial properties of Tamarindus indica linn seed and pulp. *International Journal of Science and Research Archive*. https://doi.org/10.30574/ijsra.2025.14.1.0169

11. Rebecca Akuffo Boafoa Addo, Akua Gyamfi, Nathaniel Owusu Boadi, Michael Konney Laryea, **Mercy Badu**, Lawrence Sheringham Borquaye (2025). Nanoemulsion encapsulation improves the stability and antibacterial efficacy of orange (Citrus x sinensis) peel essential oil. *Discover Chemistry.*. https://doi.org/10.1007/s44371-025-00383-w

12. Philip T. Thompson, Vivian E. Boamah, **Mercy Badu** (2024). In-vitro antioxidant, antimicrobial and phytochemical properties of extracts from the pulp and seeds of the African baobab fruit (Adansonia digitata L.). *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e29660

13. **Mercy Badu**, Gilsonda Akweley Kordei Attuquaye, Azanlerigo Emmanuel (2024). Investigating the effect of solvent on anti-antioxidant properties of Sesamum indicum seeds. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e35068

14. Stephen Tweneboah Kodua, Nathaniel Owusu Boadi, **Mercy Badu** (2024). Optimization of the Reaction Conditions in Biodiesel Production: The Case of Baobab Seed Oil as Alternative Feedstock. *Journal of Chemistry*. https://doi.org/10.1155/joch/1498240

15. **Mercy Badu**, AK Sandra (2024). Repellent and larvicidal properties of selected indigenous plants in the control of Anopheles mosquitoes. *Journal of Vector Borne Diseases*. https://journals.lww.com/jvbd/fulltext/2024/61010/repellent_and_larvicidal_properties_of_selected.10.aspx

16. Gilsonda Akweley Kordei Attuquaye, Deborah Somuah, Theophilus Frimpong, **Mercy Badu** (2023). African locust bean (Parkia biglobosa) seed coat: A source of phenolic compounds. *Food and Humanity*. https://doi.org/10.1016/j.foohum.2023.07.012

17. Nathaniel Owusu Boadi, Selina Ama Saah, **Mercy Badu**, Frimpomah Baa-Poku, Felix Odame, Patrick Opare Sakyi (2023). Assessment of sachet water quality in Kumasi, Ghana. *Discover Water*. https://doi.org/10.1007/s43832-023-00048-8

18. Andrew M. Limantol, Blessed Agbemade, Vivian E. Boamah, **Mercy Badu**, Kingsley I. Amponsah, Firdaws C.N. Adam, Rahmatu B. Mohammed (2022). Antioxidant and anti-inflammatory properties of “Limolanii” grass and perceptions of locals on its survival in the era of changing climate. *Heliyon*. https://doi.org/10.1016/j.heliyon.2022.e12018

19. Sandra Boatemaa Kushitor, **Mercy Badu**, Mawuli Komla Kushitor, Paul Currie (2022). “Working with little:” Access to market infrastructure and its effect on food handling and food safety among vegetable traders in an African city. *Frontiers in Sustainable Food Systems*. https://doi.org/10.3389/fsufs.2022.724190

20. Nathaniel Owusu Boadi, Mawuli Degbevi, Selina Ama Saah, **Mercy Badu**, Lawrence Sheringham

Borquaye, Nii Korley Kortei (2021). Antimicrobial properties of metal piperidine dithiocarbamate complexes against Staphylococcus aureus and Candida albicans. *Scientific African*. https://doi.org/10.1016/j.sciaf.2021.e00846

21. M. Djibrilla Alio Sanda, **Mercy Badu**, Awudza, Johannes A. M., Boadi, Nathaniel O. (2021). Development of TiO2-based dye-sensitized solar cells using natural dyes extracted from some plant-based materials. *Zenodo (CERN European Organization for Nuclear Research)*. https://doi.org/10.5281/zenodo.4018011
22. Temilade Sesan, Safietou Sanfo, Keneiloe Sikhwivhilu, Francis Dakyaga, Fati Aziz, Dzidzo Yirenya-Tawiah, **Mercy Badu**, Emmanuel Derbile, Mercy Ojoyi, Boubacar Ibrahim, Rabani Adamou (2021). Mediating Knowledge Co-Production for Inclusive Governance and Delivery of Food, Water and Energy Services in African Cities. *Urban Forum*. https://doi.org/10.1007/s12132-021-09440-w
23. Nathaniel Owusu Boadi, **Mercy Badu**, Nii Korley Kortei, Selina Ama Saah, Benjamin Annor, Michael Baah Mensah, Harry Okyere, Alphonse Fiebor (2021). Nutritional composition and antioxidant properties of three varieties of carrot (Daucus carota). *Scientific African*. https://doi.org/10.1016/j.sciaf.2021.e00801
24. Theophilus Fadjare Frempong, Nathaniel Owusu Boadi, **Mercy Badu** (2021). Optimization of extraction conditions for polyphenols from the stem bark of Funtumia elastica (Funtum) utilizing response surface methodology. *AAS Open Research*. https://doi.org/10.12688/aasopenres.13284.1
25. Theophilus Fadjare Frempong, **Mercy Badu**, Vivian Etsiapa Boamah, Isaac Kingsley Amponsah, Blessed Agbemade, Ransford Appianin Boateng, Nathaniel Owusu Boadi (2021). Phenolic Content, Antioxidant Properties and Antimicrobial Activities of the Extracts from Funtumia africana and Funtumia elastica. *Chemistry Africa*. https://doi.org/10.1007/s42250-021-00249-5
26. **Mercy Badu**, Mary-Magdalene Pedavoah, Nathaniel O Boadi, Irene Y Dzaye (2021). Proximate Composition, In vitro Antioxidant and Anti-inflammatory Properties of Adansonia digitata and Belanites aegyptiaca Seeds. *Journal Of Tropical Pharmacy And Chemistry*. https://doi.org/10.25026/jtpc.v5i4.296
27. **M Badu** (2021). Transesterification of palm kernel oil using calcium oxide as catalyst. *International Journal of Chemical and Biochemical Sciences*. https://www.academia.edu/download/71991970/1_IJCBS_21_19_1.pdf
28. **Mercy Badu**, Mary-Magdalene Pedavoah, Irene Yayra Dzaye (2020). Proximate Composition, Antioxidant Properties, Mineral Content and Anti-nutritional Composition ofSesamum Indicum, Cucumeropsis EdulisandCucurbita PepoSeeds Grown in the Savanna Regions of Ghana. *Journal of Herbs Spices & Medicinal Plants*. https://doi.org/10.1080/10496475.2020.1747581
29. Michael Baah Mensah, NO Boadi, **M Badu** (2019). Characterization of latex from trees in the Bobiri forest of Ghana. *International Scientific Organization*. https://www.researchgate.net/profile/Nathaniel-Boadi/publication/334638922_Characterization_of_latex_from_trees_in_the_Bobiri_forest_of_Ghana/links/5d378ac6a6fdcc370a5a2d1b/Characterization-of-latex-from-trees-in-the-Bobiri-forest-of-Ghana.pdf
30. **Mercy Badu**, Johannes Awudza, Peter M. Budd, Stephen Yeates (2018). Determination of Physical Properties and Crystallization Kinetics of Oil From Allanblackia Seeds and Shea Nuts Under Different Thermal Conditions. *European Journal of Lipid Science and Technology*. https://doi.org/10.1002/ejlt.201700156
31. Mary-Magdalene Pedavoah, **Mercy Badu**, Nathaniel O. Boadi, Johannes A. M. Awudza (2018). Green Bio-Based CaO from Guinea Fowl Eggshells. *Green and Sustainable Chemistry*. https://doi.org/10.4236/gsc.2018.82015
32. **Mercy Badu**, FK Ampong, I Nkrumah, RK Nkum, F Boakye (2017). A new route for the synthesis of CdS thin films from acidic chemical baths. *International Journal of in Films Science and Technology*. https://www.researchgate.net/profile/Tizazu-Abza-2/publication/317547711_A_New_Route_for_the_Synthesis_of_CdS_Thin_Films_from_Acidic_Chemical_Baths/links/5bb35a5545851574f7f47a70/A-New-Route-for-the-Synthesis-of-CdS-Thin-Films-from-Acidic-Chemical-Baths.pdf?_sg%5B0%5D%5C%5Cx3dstarted_experiment_milestone%5C%5Cx26origin%5C%5Cx3djournalDetail
33. **Mercy Badu**, A. M. Johannes Awudza (2016). Determination of the triacylglycerol content for the identification and assessment of purity of shea butter fat, peanut oil, and palm kernel oil using maldi-tof/

tof mass spectroscopic technique. *International Journal of Food Properties*. https://doi.org/10.1080/10942912.2016.1155056

34. MB Mensah, NO Boadi, DD Wemegah, **M Badu** (2016). Physicochemical Properties and Levels of Heavy Metals in Selected Rivers within the Kumasi Metropolis of Ghana. *International Journal of Science and Technology*.

35. **Mercy Badu** (2016). Phytochemical screening, antimicrobial and antioxidant properties of assorted Carica papaya leaves in Ghana. *Journal of Medicinal Plants Studies*. https://www.academia.edu/download/76955116/4-6-6-858.pdf

36. **M Badu**, NO Boadi (2014). Evaluation of adsorption of textile dyes by wood sawdust. *Research Journal of Physical and Applied Sciences*. https://www.researchgate.net/profile/Isaac-Boateng/publication/311645547_Evaluation_of_adsorption_of_textile_dyes_by_wood_sawdust/links/5851cddc08ae7d33e0183a35/Evaluation-of-adsorption-of-textile-dyes-by-wood-sawdust.pdf

37. **M Badu**, DD Wemegah, NO Boadi (2013). Assessment of the nutrient load and selected heavy metals in the Owabi reservoir and its feeder waters. *American Journal of Scientific and Industrial Research*. https://www.scihub.org/AJSIR/PDF/2013/4/AJSIR-4-4-337-343.pdf

38. NO Boadi, **M Badu**, JK Mensah (2013). Effect of Mercury on the Proximate Composition of Maize (Zea mays L.). *Journal of Agricultural Science and Technology B*. https://www.academia.edu/download/31798127/Volume_3__Number_7B__2013.pdf#page=33

39. **M Badu**, JK Mensah, NO BOADI (2012). ANTIOXIDANT ACTIVITY OF METHANOL AND ETHANOL/WATER EXTRACTS OF TETRAPLEURA TETRAPTERA AND PARKIA BIGLOBOSA. *International Journal of Pharma and Biosciences*. https://doi.org/10.5555/20123374966

40. Nathaniel Boadi, John Mensah, Sylvester Twumasi, **Mercy Badu**, Irene Osei (2012). Levels of selected heavy metals in canned tomato paste sold in Ghana. *Food Additives and Contaminants Part B*. https://doi.org/10.1080/19393210.2012.657250

41. **Mercy Badu**, Sylvester K. Twumasi, Nathaniel O. Boadi (2011). Effects of Lignocellulosic in Wood Used as Substrate on the Quality and Yield of Mushrooms. *Food and Nutrition Sciences*. https://doi.org/10.4236/fns.2011.27107

42. **M Badu**, S. Twumasi (2011). Heavy metal contamination in canned fish marketed in Ghana. *American Journal of Scientific and Industrial Research*. https://doi.org/10.5251/ajsir.2011.2.6.877.882

43. Marian Asantewah Nkansah, Nathaniel Owusu Boadi, **Mercy Badu** (2010). Assessment of the Quality of Water from Hand-Dug Wells in Ghana. *Environmental Health Insights*. https://doi.org/10.4137/ehi.s3149

Theses 1

1. **Mercy Badu** (2023). Effect of supplier selection on procurement performance of organizations in Ghana. *KNUST*. https://scholar.google.com/scholar?cluster=11306053448718330012&hl=en&oi=scholarr