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RESEARCH

Interests: Inorganic materials · extractive metallurgy · catalysis

Areas: Water Science and Technology · Biomedical Engineering · Mechanical Engineering · Biomaterials · Materials Chemistry · Geochemistry and Petrology

RESEARCH SUMMARY

40	484	12	12	1.11	4%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 40 publications listed below, 1986–2026. Field-weighted impact is the mean over the 23 works scored for it; 1.00 is the world average for works of the same field, type and year. 1 of the 23 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Kwame Nkrumah University of Science and Technology
Materials Engineering, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD
Inorganic Chemical Technology, Pannon Egyetem, Veszprem, Hungary

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Ghana Institute of Engineers (GhIE)
Accra, Ghana

PUBLICATIONS

Journal articles 40

1. **Francis W. Y. Momade**, A Ntiamoah, HMK Essandoh (2026). Enhancement of Fluoride Uptake via Fe (III) Functionalization of Zeolite Y: Comparative Modification Approaches. *Microporous and Mesoporous Materials*. https://www.sciencedirect.com/science/article/pii/S138718112600209X
2. Drussilla A. Pobee, Godfred Ohemeng-Boahen, Augustine Ntiamoah, Helen M.K. Essandoh, Mandela Toku, **Francis W.Y. Momade** (2026). Enhancement of fluoride uptake via Fe (III) functionalisation of zeolite Y: Comparative modification approaches. *Microporous and Mesoporous Materials*. https://doi.org/10.1016/j.micromeso.2026.114234
3. Miriam Appiah-Brempong, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, **Francis Yao Momade** (2024). Bone Char Adsorption of COD and Colour from Tannery Wastewater: Breakthrough Curve Analysis and Fixed Bed Dynamic Modelling. *Advances in Civil Engineering*. https://doi.org/10.1155/2024/6651094
4. H Essandoh, **FWY Momade**, EA Gaveh (2024). Lettuce Response to Enhanced Struvite Recovered from Faecal Sludge Effluent and the Probabilistic Health Risk Assessment of Heavy Metals Through the Intake

of the Lettuce. *International Journal of Research and Innovation in Applied Science*. https://ideas.repec.org/a/bjf/journl/v9y2024i3p317-335.html

5. Miriam Appiah-Brempong, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, Samuel Kwame Dadzie, **Francis Yao Momade** (2023). Performance Optimization of Chemical and Green Coagulants in Tannery Wastewater Treatment: A Response Surface Methodology Approach. *Journal of Optimization*. https://doi.org/10.1155/2023/9939499
6. Miriam Appiah-Brempong, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, Gabriel Ntoni, **Francis Yao Momade** (2023). Removal of Colour and COD from vegetable tannery wastewater onto bone char– Effect of process parameters, adsorption mechanism, kinetics and equilibrium modelling. *Separation Science and Technology*. https://doi.org/10.1080/01496395.2023.2212857
7. Miriam Appiah-Brempong, Helen Michelle Korkor Essandoh, Nana Yaw Asiedu, Samuel Kwame Dadzie, **Francis Warings Yao Momade** (2021). Artisanal tannery wastewater: quantity and characteristics. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e08680
8. Isaac Enyemadze, **Francis W. Y. Momade**, Sampson Oduro-Kwarteng, Helen Essandoh (2021). Phosphorus recovery by struvite precipitation: a review of the impact of calcium on struvite quality. *Journal of Water Sanitation and Hygiene for Development*. https://doi.org/10.2166/washdev.2021.078
9. Rita Namoe Tabi, Frank Ofori Agyemang, Kwadwo Mensah-Darkwa, Emmanuel Kwesi Arthur, Emmanuel Gikunoo, **Francis Momade** (2021). Zeolite synthesis and its application in water defluorination. *Materials Chemistry and Physics*. https://doi.org/10.1016/j.matchemphys.2021.124229
10. Miriam Appiah-Brempong, Helen M. K. Essandoh, Nana Yaw Asiedu, Samuel Kwame Dadzie, **Francis Warings Yao Momade** (2020). An insight into artisanal leather making in Ghana. *Journal of Leather Science and Engineering*. https://doi.org/10.1186/s42825-020-00039-8
11. Faustina Atipoka, Andrea Iris Schäfer, **Francis Momade** (2020). Fluoride in groundwater in the Bongo District, Ghana: an assessment, health impact and possible mitigation strategies. *Desalination and Water Treatment*. https://doi.org/10.5004/dwt.2020.25196
12. Frank Ofori Agyemang, Fang Li, **Francis W.Y. Momade**, Hern Kim (2016). Effect of poly(ethylene oxide) and water on electrospun poly(vinylidene fluoride) nanofibers with enhanced mechanical properties as pre-filter for oil-in-water filtration. *Materials Chemistry and Physics*. https://doi.org/10.1016/j.matchemphys.2016.07.025
13. Richard Appiah-Ntiamoah, Arvind H. Jadhav, John. Marc. C. Puguan, **Francis W. Y. Momade**, Hern Kim (2015). A silica nanoparticle supported fluorescence “turn-on” fluoride ion sensing system with tunable structure and sensitivity. *RSC Advances*. https://doi.org/10.1039/c5ra02158h
14. Juliet Osei, Simon KY Gawu, Andrea I Schäfer, Faustina A Atipoka, **Francis WY Momade** (2015). Impact of laterite characteristics on fluoride removal from water. *Journal of Chemical Technology & Biotechnology*. https://doi.org/10.1002/jctb.4656
15. **FWY Momade** (2015). Preparation and characterization of palmitoyl grafted cellulose nano absorbent for the efficient adsorption of pyrene from aqueous solution. *Journal of Nanoscience and Nanotechnology*. https://www.ingentaconnect.com/contentone/asp/jnn/2015/00000015/00000010/art00107
16. **Francis W. Y. Momade** (2015). The impact of Jarosites in Biox® product on CIL processes-a case study of AngloGold Ashanti (Obuasi mine). *YL Tezi, FBE, Kwame Nkrumah Üniversitesi*. https://scholar.google.com/scholar?cluster=12565565478959897 73&hl=en&oi=scholarr
17. Ernest Evans Arthur, Fang Li, **Francis W.Y. Momade**, Hern Kim (2014). Catalytic hydrolysis of ammonia borane for hydrogen generation using cobalt nanocluster catalyst supported on polydopamine functionalized multiwalled carbon nanotube. *Energy*. https://doi.org/10.1016/j.energy.2014.08.080
18. J. Chandradass, Hern Kim, **Francis W.Y. Momade** (2014). Effect of different solvents in the synthesis of LaCoO3 nanopowders prepared by the co-precipitation method. *Advanced Powder Technology*. https://doi.org/10.1016/j.apt.2014.07.014
19. Lemuel Gbologah, P.S. Kwawukume, **Francis W.Y. Momade** (2013). Sol-Gel Mullite-SiC Oxidation Protective Coating for Carbon-Carbon Composites. *International journal of engineering research in Africa*.

https://doi.org/10.4028/www.scientific.net/jera.10.13

20. Richard Appiah-Ntiamoah, Xuan Thang Mai, **Francis W.Y. Momade**, Hern Kim (2012). Adsorption of Benzene from Aqueous Solution Using Base Modified Expanded Perlite. *Advanced materials research*. https://doi.org/10.4028/www.scientific.net/amr.622-623.1779
21. Xuan Thang Mai, Richard Appiah-Ntiamoah, **Francis W.Y. Momade**, Hern Kim (2012). Esterification of Cellulose with Palmitoyl Chloride by Using Microwave Irradiation and Application to Adsorption of Methylene Blue. *Advanced materials research*. https://doi.org/10.4028/www.scientific.net/amr.622-623.1768
22. Robert Amoanyi, P.S. Kwawukume, **Francis W.Y. Momade** (2012). Improving the Strength Properties of Afari and Mfensi Clays by Chemical Stabilization. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.8.1
23. J. Chandradass, Hern Kim, **Francis W. Y. Momade** (2012). Synthesis of ultrafine MgFe2O4 nanofibers via electrospining using sol–gel precursor. *Journal of Sol-Gel Science and Technology*. https://doi.org/10.1007/s10971-012-2923-3
24. **FWY Momade**, SKY Gawu (2009). LITHOMARGIC CLAY TYPES FROM AWASO BAUXITE DEPOSIT, GHANA: IMPLICATIONS FOR POSSIBLE INDUSTRIAL UTILIZATION. *Journal of Science and Technology, Kumasi, Ghana*. https://scholar.google.com/scholar?cluster=16502870226787677946&hl=en&oi=scholarr
25. **F.W.Y. Momade**, K. Sraku-Lartey (2009). Studies into the preparation of alum from slime waste from the Awaso Bauxite Washing Plant. *Hydrometallurgy*. https://doi.org/10.1016/j.hydromet.2009.11.013
26. **FYW Momade** (2008). A study of the behaviour of manganese dioxide ore-coated graphite pellets during high temperature treatment. *Journal of the Ghana Instituton of Engineers*.
27. **FY Momade** (2008). Heavy metals in the Libga, Bontanga, Golinga reservoirs. *Abass, C.,(2010). Stomach content of the catfish Clarias auguillaris in the Golinga Reservoir. Thesis submitted to the University for Development Studies. Faculty of Renewable Natural Resources*. https://scholar.google.com/scholar?cluster=13820749987579859 29&hl=en&oi=scholarr
28. **FWY Momade** (2008). The Concentration of Some Heavy Metals in the Botanga, Golinga and Libga Irrigation Reservoirs in the Northern Region of Ghana. *International Journal of Pure and Applied Sciences*.
29. **FWY Momade** (2007). Preliminary studies on the water quality of the active areas of the Ashanti gold belt. *The First International Conference on Environmental Research, Technology and Policy,(ERTEP)*. https://scholar.google.com/scholar?cluster=8864818169192314792&hl=en&oi=scholarr
30. **FYW Momade** (2007). The Potential and Technology Options for Refining the Kibi Bauxite Deposit as part of an Integrated Aluminium Industry in Ghana. *Journal of Engineering & Technology*.
31. **FWY Momade** (2003). A Survey of Mining Practices and Environmental Awareness of Selected Mining Companies in Ghana. *Ghana Mining Journal*.
32. **FWY Momade** (2000). Combined Thermochemical and Hydrometallurgical Treatment of Low-Grade Manganese Ore from the Nsuta-Dagwen Deposit. *Ghana Mining Journal*.
33. **F.W.Y Momade**, Zs.G Momade (1999). A study of the kinetics of reductive leaching of manganese oxide ore in aqueous methanol–sulphuric acid medium. *Hydrometallurgy*. https://doi.org/10.1016/s0304-386x(99)00048-1
34. **F.W.Y Momade**, Zs.G Momade (1999). Reductive leaching of manganese oxide ore in aqueous methanol–sulphuric acid medium. *Hydrometallurgy*. https://doi.org/10.1016/s0304-386x(98)00077-2
35. **FWY Momade** (1996). Manganese Sulphate Production from Nsuta-Dajwin Low Grade Manganese Carbonate Ore. *Ghana Mining Journal*.
36. **Francis W.Y. Momade** (1996). Sulphuric acid leaching of the Nsuta manganese carbonate ore. *Hydrometallurgy*. https://doi.org/10.1016/0304-386x(94)00089-I
37. **FYW Momade** (1995). The effect of digestion additives on some mineral phases in the Kibi bauxite. *Ghana Mining Journal*.

38. **FYW Momade** (1991). Technological investigations of the Kibi bauxite: Digestion. *Journal of Science and Technology (Ghana)*.

39. **FYW Momade** (1990). Some aspects of the mineralogy of the Kibi bauxite. *Journal of Science and Technology (Ghana)*. https://journal.knust.edu.gh/index.php/just/article/view/1068

40. **FWY Momade** (1986). The Investigation of Digestibility of Kibi Bauxite From Ghana. *Banyasz. Kohasz. Lapok(Kohasz.)*. https://scholar.google.com/scholar?cluster=9710581808411168802&hl=en&oi=scholarr