

# Prof. Nathaniel Owusu Boadi

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Department of Chemistry  
Kwame Nkrumah University of Science and Technology  
Kumasi  
Ghana

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## Education

PhD Inorganic Chemistry, 2015  
Kwame Nkrumah University of Science and Technology,  
Kumasi. Ghana  
**Thesis:** Synthesis of lead chalcogenide nanoparticles and thin films from single-source precursors.

M.Sc., Environmental Chemistry (by research), 2006  
Kwame Nkrumah University of Science and Technology,  
Kumasi. Ghana  
**Thesis:** Determination of levels of cyanide in soils, water and cassava at Bibiani-A gold mining town in Ghana.

B.Sc. Chemistry, 2002  
Kwame Nkrumah University of Science and Technology,  
Kumasi. Ghana

## Academic and Teaching Experience

*August 2021 – Present*

**Professor**, Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

I teach the following courses:

- Recent Advances in Coordination Chemistry
- Group Theory and Inorganic Spectroscopy
- Basic Inorganic Chemistry
- Introduction to Nanoscience and Technology
- Lanthanons, Actinons and Heavy Transition Metals
- Applications of Nanoscience and Technology to Polymers

*August 2018 – July, 2021*

**Associate Professor**, Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

I taught the following courses:

- Organometallic Chemistry
- Advanced General Chemistry
- Applications of Nanoscience and Technology

*August 2018 – July 2019*

**Head of Department**, Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

*October 2012– July 2018*

**Senior Lecturer**, Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

I taught the following courses:

- Main group and Transition metals
- Lanthanides and Actinides and Heavy Transition Metals
- Organometallic Chemistry
- Advanced General Chemistry
- Applications of Nanoscience and Technology

*July 2011-December 2013 (six months each year)*

**Research Fellow (Honorary Staff)** - School of Chemistry: The University of Manchester, UK.

My research was on single-source routes to the synthesis of lead chalcogenides.

- I worked under the supervision of Prof. Paul O'Brien, FRS, to synthesise lead(II) imidodichalcogeno (S,Se) complexes as single-source precursors and used these precursors to synthesise lead chalcogenide nanoparticles by hot injection method and produce lead chalcogenide thin films by aerosol assisted chemical vapour deposition (AACVD) method. I synthesised and solved the crystal structures of five novel lead (II) imidodichalcogeno (S,Se) complexes and have deposited them in the Cambridge crystallographic database through the University of Manchester, United Kingdom.

*January 2007 – September 2012*

**Lecturer** - Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

I taught the following courses:

- Main group and Transition metals
- Lanthanides and Actinides and Heavy Transition Metals
- Titrimetric Methods of Analysis
- Gravimetric and Electroanalytical methods
- Practical Chemistry

- Environmental Chemistry
- Advanced General Chemistry
- Applications of Nanoscience and Technology

*Aug 2003 – April 2006*

**Graduate Assistant** - Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

- My job was mainly to assist in undergraduate laboratory practical work.

*Aug 2002 – July 2003*

**Teaching Assistant** - Department of Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi. Ghana

- I handled tutorial lessons in Organic, inorganic and analytical chemistry to undergraduate chemistry, biochemistry and chemical engineering students.

### **Publications**

1. Saah, S.A., Sakyi, P.O., Adu-Poku, D., **Boadi, N.O.**, Djan, G., Amponsah, D., Devine, R.N.O.A., et al. (2023), “Docking and Molecular Dynamics Identify Leads against 5 Alpha Reductase 2 for Benign Prostate Hyperplasia Treatment”, *Journal of Chemistry*, Vol. 2023 No. 16, available at:<https://doi.org/10.1155/2023/8880213>.
2. Sarpong, L., **Boadi, N.O.** and Akoto, O. (2023), “Metal Fractionation and Leaching in Soils from a Gold Mining Area in the Equatorial Rainforest Zone”, edited by Rehman, *R.Journal of Chemistry*, Hindawi, Vol. 2023, p. 3542165.
3. Akoto, O., Yakubu, S., Ofori, L.A., Bortey-sam, N., **Boadi, N.O.**, Horgah, J. and Sackey, L.N.A. (2023), “Multivariate studies and heavy metal pollution in soil from gold mining area”, *Heliyon*, Elsevier Ltd, Vol. 9 No. 1, available at:<https://doi.org/10.1016/j.heliyon.2022.e12661>.
4. Mensah, C.N., Ampomah, G.B., Mensah, J.O., Gasu, E.N., Aboagye, C.I., Ekuadzi, E., **Boadi, N.O.**, et al. (2022), “N-alkylimidazole derivatives as potential inhibitors of quorum sensing in *Pseudomonas aeruginosa*”, *Heliyon*, The Author(s), Vol. 8 No. 12, p. e12581.
5. Saah, S.A., **Boadi, N.O.** and Awudza, J.A.M. (2022), “Facile synthesis of PbS, Bi<sub>2</sub>S<sub>3</sub> and Bi-doped PbS nanoparticles from metal piperidine dithiocarbamates complexes”, *Results in Chemistry*, Elsevier B.V., Vol. 4 No. 2022, p. 100618.
6. Saah, S.A., **Boadi, N.O.**, Sakyi, P.O., Darko, G. and Mensah, M.B. (2022), “Risk of Exposure to Trace Elements through the Application of Facial Makeup Powders”, *Journal of Chemistry*, Hindawi Limited, Vol. 2022, available at:<https://doi.org/10.1155/2022/9229134>.
7. Saah, S.A., **Boadi, N.O.**, Awudza, J.A.M. and Revaprasadu, N. (2022), “Structural influence of nitrogen adducts on the morphology of bismuth sulfide thin films”, *MRS Advances*, pp. 1–6.
8. Mensah, M.B., **Boadi, N.O.** and Awudza, J.A.M. (2022), “Growth Kinetics of Zinc Sulphide Nanocrystals Synthesized by Colloidal Thermolysis of Fatty Acid Carboxylates”, *Journal of Chemistry*, Vol. 2022, pp. 1–7.
9. Kotei, P.A., **Boadi, N.O.**, Saah, S.A. and Mensah, M.B. (2022), “Synthesis of Nickel Sulfide Thin Films and Nanocrystals from the Nickel Ethyl Xanthate Complex”, *Advances in Materials Science and Engineering*, Vol. 2022, pp. 1–10.

10. Kortei, N.K., Annan, T., Kyei-Baffour, V., Essuman, E.K., Boakye, A.A., Clement Okraku, T. and **Boadi, N.O.** (2022), “Exposure assessment and cancer risk characterization of aflatoxin M1 (AFM1) through ingestion of raw cow milk in southern Ghana”, *Toxicology Reports*, Elsevier B.V., Vol. 9 No. May, pp. 1189–1197.
11. Nimako, C., Ichise, T., Hasegawa, H., Akoto, O., **Boadi, N.O.**, Taira, K., Fujioka, K., et al. (2022), “Assessment of ameliorative effects of organic dietary interventions on neonicotinoid exposure rates in a Japanese population”, *Environment International*, Pergamon, Vol. 162, p. 107169.
12. **Boadi, N.O.**, Degbevi, M., Saah, S.A., Badu, M., Borquaye, L.S. and Kortei, N.K. (2021), “Antimicrobial properties of metal piperidine dithiocarbamate complexes against *Staphylococcus aureus* and *Candida albicans*”, *Scientific African*, Elsevier B.V., Vol. 12, p. e00846.
13. Frempong, T.F., Badu, M., Boamah, V.E., Amponsah, I.K., Agbemade, B., Boateng, R.A. and **Boadi, N.O.** (2021), “Phenolic Content, Antioxidant Properties and Antimicrobial Activities of the Extracts from *Funtumia africana* and *Funtumia elastica*”, *Chemistry Africa*, Springer, pp. 1–10.
14. Badu, M., Boateng, R.A., Padevoah, M.M., Agbemade, B., Quainoo, T., Mensah, M.B. and **Boadi, N.O.** (2021), “Transesterification of palm kernel oil using calcium oxide as catalyst”, *International Journal of Chemical and Biochemical Sciences*, Vol. 19 No. 2021, pp. 1–11.
15. Mensah, M.B., Lewis, D.J., **Boadi, N.O.** and Awudza, J.A.M. (2021), “Heavy metal pollution and the role of inorganic nanomaterials in environmental remediation – Enhanced Reader.pdf”, *Royal Society Open Science*, Vol. 8 No. 201485, pp. 1–20.
16. **Boadi, N.O.**, Badu, M., Kortei, N.K., Saah, S.A., Annor, B., Mensah, M.B., Okyere, H., et al. (2021), “Nutritional composition and antioxidant properties of three varieties of carrot (*Daucus carota*)”, *Scientific African*, Elsevier B.V., Vol. 12, p. e00801.
17. Fadjare Frempong, T., **Owusu Boadi, N.** and Badu, M. (2021), “Optimisation of extraction conditions for polyphenols from the stem bark of *Funtumia elastica* (Funtum) utilising response surface methodology [version 1; peer review: 2 approved, 1 approved with reservations]”, *AAS Open Research*, Vol. 4 No. 46, available at: <https://doi.org/10.12688/aasopenres.13284.1>.
18. Badu, M., Pedavoah, M.-M., **Boadi, N.O.** and Dzaye, I.Y. (2021), “Proximate Composition, In vitro Antioxidant and Anti-inflammatory Properties of *Adansonia digitata* and *Belanites aegyptiaca* Seed”, *Journal of Tropical Pharmacy and Chemistry*, Vol. 5 No. 4, pp. 286–298.
19. Mensah, M.B., Jumpah, H., **Boadi, N.O.** and Awudza, J.A.M. (2021), “Assessment of quantities and composition of corn stover in Ghana and their conversion into bioethanol”, *Scientific African*, Elsevier B.V., Vol. 12, p. e00731.
20. Sanda, M.D.A., Badu, M., Awudza, J.A.M. and **Boadi, N.O.** (2021), “Development of TiO<sub>2</sub> -based dye-sensitised solar cells using natural dyes extracted from some plant-based materials”, *Chemistry International*, Vol. 7 No. 1, pp. 9–20.
21. Saah, S.A., Adu-poku, D. and **Boadi, N.O.** (2021), “Heavy metal contamination and water quality of selected fish ponds at Sunyani , Ghana : A comparison with WHO standards”, *Chemistry International*, Vol. 7 No. 3, pp. 181–187.
22. **Boadi, N.O.**, Saah, S.A. and Awudza, J.A.M. (2020), “Synthesis of a novel single-source precursor for the production of lead chalcogenide thin films”, *Journal of Chemistry*, Vol. 2020, pp. 1–7.

23. **Boadi, N.O.**, Saah, S.A., Baa-poku, F., Mensah, E.A. and Addo, M. (2020), “Safety of borehole water as an alternative drinking water source”, *Scientific African, Elsevier B.V.*, Vol. 10 No. 2020, p. e00657.
24. Kortei, N.K., Heymann, M.E., Essuman, E.K., Kpodo, F.M., Akonor, P.T., Lokpo, S.Y., **Boadi, N.O.**, et al. (2020), “Health risk assessment and levels of toxic metals in fishes (*Oreochromis niloticus* and *Clarias anguillaris*) from Ankobrah and Pra basins: Impact of illegal mining activities on food safety”, *Toxicology Reports, Elsevier*, Vol. 7, pp. 360–369.
25. Kortei, N.K., Koryo-Dabrah, A., Akonor, P.T., Yaw, N., Manaphraim, B., Ayim-Akonor, M., **Boadi, N.O.**, et al. (2020), “Potential health risk assessment of toxic metals contamination in clay eaten as pica ( geophagia ) among pregnant women of Ho in the Volta Region of Ghana”, *BMC Pregnancy and Childbirth, BMC Pregnancy and Childbirth*, Vol. 4, pp. 1–7.
26. **Boadi, N.O.**, Saah, S.A., Mensah, M.B. and Awudza, J.A.M. (2020), “Aerosol-Assisted Chemical Vapour Deposition of Lead Chalcogenide Thin Films from  $[Pb((Se^iPr_2)_2N)(S_2CNHexMe)]$ ”, *Advances in Materials Science and Engineering*, Vol. 2020, pp. 1–7.
27. **Boadi, N.O.**, Saah, S.A., Helliwell, M. and Awudza, J.A.M. (2019), “Hot-Injection Synthesis of PbE (E= S, Se) Nanoparticles from Dichalcogenoimidophosphinato Lead (II) Complexes”, *ChemistrySelect*, Vol. 4 No. 47, pp. 13908–13911.
28. Saah, S.A., **Boadi, N.O.**, Adu-Poku, D. and Wilkins, C. (2019), “Lead ethyl dithiocarbamates : efficient single-source precursors to PbS nanocubes”, *Royal Society Open Science*, Vol. 6 No. 190943, pp. 1–8.
29. Saah, S.A., **Boadi, N.O.** and Wilkins, C. (2019), “Deposition of PbS Thin Films from Lead Hexadecyl and Octadecyl Xanthate Complexes Using the Spin Coating Method”, *MRS Advances*, pp. 733–742.
30. Seidu-Makinca, M., Saah, S.A., **Boadi, N.O.**, Badu, M., Mensah, M.B. and Awudza, J.A.M. (2019), “Characterisation of latex from trees in the Bobiri forest of Ghana”, *Current Science Perspectives*, Vol. 5 No. 3, pp. 40–47.
31. Bolor, V.K., **Boadi, N.O.**, Borquaye, L.S. and Afful, S. (2018), “Human risk assessment of organochlorine pesticide residues in vegetables from Kumasi, Ghana”, *Journal of Chemistry, Hindawi*, Vol. 2018, pp. 1–11.
32. Forkuoh, F., **Boadi, N.O.**, Borquaye, L.S. and Afful, S. (2018), “Risk Of Human Dietary Exposure To Organochlorine Pesticide Residues In Fruits From Ghana”, *Scientific Reports, Nature Publishing Group*, Vol. 8 No. 1, pp. 1–5.
33. **Boadi, N.O.**, Borquaye, L.S., Darko, G., Wemegah, D.D., Agorsor, D. and Akrofi, R. (2018), “Assessment of the quality of the Owabi reservoir and its tributaries”, *Cogent Food & Agriculture, Taylor & Francis*, Vol. 4 No. 1, p. 1492360.
34. Pedavoah, M., Badu, M., **Boadi, N.O.** and Awudza, J.A.M. (2018), “Green Bio-Based CaO from Guinea Fowl Eggshells”, *Green and Sustainable Chemistry, Scientific Research Publishing*, Vol. 8, pp. 208–219.
35. **Boadi, N.O.**, Mcnaughtner, P.D., Helliwell, M., Azad, M., Awudza, J.A.M., Brien, P.O., Malik, M.A., et al. (2016), “The Deposition of PbS and PbSe Thin Films from Lead Dichalcogenoimidophosphinates by AACVD”, *Inorganica Chimica Acta, The Authors*, Vol. 453, pp. 439–442.
36. Alorkpa, E.J., **Boadi, N.O.**, Badu, M. and Saah, S.A. (2016), “Phytochemical screening, antimicrobial and antioxidant properties of assorted *Carica papaya* leaves in Ghana”, *Journal of Medicinal Plants Studies*, Vol. 4 No. 6, pp. 193–198.

37. Boakye, S., Jonfia-Essien, W., Voegborlo, R.B. and **Boadi, N.O.** (2016), “Assessment of Organochlorine Pesticides in Cocoa Beans from Ashanti and Brong Ahafo Regions of Ghana”, *IJRDO-Journal of Applied Science*, Vol. 2 No. 11, pp. 7–19.
38. Mensah, M.B., **Boadi, N.O.**, Baa-Poku, F., Wemegah, D.D., Badu, M., Saah, S.A. and Osei-Dei, B. (2016), “Physicochemical Properties and Levels of Heavy Metals in Selected Rivers within the Kumasi Metropolis of Ghana”, *International Journal of Science and Technology*, Vol. 5 No. 12, pp. 616–623.
39. **Boadi, N.O.**, Saah, S.A., Mensah, K., Badu, M., Addai-Arhin, S. and Mensah, M.B. (2015), “Phytoconstituents , antimicrobial and antioxidant properties of the leaves of *Persea americana* Mill cultivated in Ghana”, *Journal of Medicinal Plants Research*, Vol. 9 No. 36, pp. 933–939.
40. Malik, A., Saah, S.A. and **Boadi, N.O.** (2014), “Physicochemical and Microbial Properties of Sachet Water in the Kumasi Metropolis of Ghana”, *Ghana Journal of Chemistry*, Vol. 1 No. 2, pp. 1–11.
41. Badu, M., Boateng, I. and **Boadi, N.** (2014), “Evaluation of adsorption of textile dyes by wood sawdust”, *Research Journal of Physical and Applied Sciences*, Vol. 3 No. 1, pp. 6–14.
42. **Boadi, N.O.**, Okyere, H., Badu, M., Mensah, J.K. and Owusu-appiah, I. (2013), “Effect of Mercury on the Proximate Composition of Maize (*Zea mays* L.)”, *Journal of Agricultural Science and Technology B*, Vol. 3, pp. 487–492.
43. Badu, M., Wemegah, D.D., **Boadi, N.O.** and Brown, F.A. (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*, Vol. 4 No. 4, pp. 337–343.
44. Badu, M., Mensah, J.K. and **Boadi, N.O.** (2012), “Antioxidant Activity of Methanol and Ethanol/Water Extracts of *Tetrapleura Tetraptera* and *Parkia Biglobosa*”, *International Journal of Pharma and Bio Sciences*, Vol. 3 No. 3, pp. 312–321.
45. **Boadi, N.**, Mensah, J., Twumasi, S., Badu, M. and Osei, I. (2012), “Levels of selected heavy metals in canned tomato paste sold in Ghana”, *Food Additives and Contaminants: Part B*, Vol. 5 No. 1, pp. 50–54.
46. **Boadi, N.O.**, Malik, M.A., O’Brien, P. and Awudza, J.A.M. (2012), “Single source molecular precursor routes to lead chalcogenides.”, *Dalton Transactions (Cambridge, England : 2003)*, Vol. 41, pp. 10497–10506.
47. Badu, M., Twumasi, S.K. and **Boadi, N.O.** (2011), “Effects of Lignocellulosic in Wood Used as Substrate on the Quality and Yield of Mushrooms”, *Food and Nutrition Sciences*, Vol. 02 No. 07, pp. 780–784.
48. **Boadi, N.O.**, Twumasi, S.K., Badu, M. and Osei, I. (2011), “Heavy metal contamination in canned fish marketed in Ghana”, *American Journal of Scientific and Industrial Research*, Vol. 2 No. 6, pp. 877–882.
49. Akoto, O., Appiah, F. and **Boadi, N.O.** (2011), “Physicochemical Analysis of Roof Runoffs from the Obuasi Area”, *Water Practice & Technology*, Vol. 6 No. 1, p. wpt2011003.
50. Nkansah, M.A., **Boadi, N.O.** and Badu, M. (2010), “Assessment of the quality of water from hand-dug wells in Ghana.”, *Environmental Health Insights*, Vol. 4, pp. 7–12.
51. **Boadi, N.O.**, Twumasi, S.K. and Ephraim, J.H. (2009), “Impact of Cyanide Utilisation in Mining on the Environment”, *International Journal of Environmental Research*, Vol. 3 No. 1, pp. 101–108.

## Conference Presentations

1. **NO. Boadi**, S.A. Saah, M.B. Mensah and J.A.M. Awudza (2021). Synthesis and characterisation of lead chalcogenide nanoparticles from  $[Pb((SeP^iPr_2)_2N(S_2CNEt_2))]$  complex by pyrolysis method. RS-DFID Conference titled 'Chemistry to Functional Materials Conference', 8-9 April, 2021. University of Manchester (Virtual)
2. M-M. Pedavoah, M. Badu, **N.O. Boadi** and J.A.M. Awudza (2019). Exploring *Ceiba petandra* seed oil as feedstock and modified guinea fowl eggshells as biocatalyst for diesel production. International Conference titled 'Materials for Renewable and Sustainable energy: From Research to Development', 3<sup>rd</sup>-5<sup>th</sup> June, 2019, amonoo-Neizer Conference Centre, KNUST.
3. MD. Alio Sanda, J.A.M. Awudza, M. Badu and **N.O. Boadi** (2018). Development of Dye-Sensitised Solar Cells from Natural Dyes. 7th GSA. One Day Research Seminar and Poster Presentations, 18<sup>th</sup> April, 2018, College of Science Allotey Auditorium, KNUST.
4. R. Wogbe-Dogoe and **N.O. Boadi** (2018). Deposition of Silver Sulphide Thin films from Silver Dithiocarbamate Complexes Using the Spin Coating Method. 7th GSA. One Day Research Seminar and Poster Presentations, 18<sup>th</sup> April, 2018, College of Science Allotey Auditorium, KNUST.
5. D. Agorzo, **N.O. Boadi**, G. Darko and L.S. Borquaye (2016). Assessment of Nutrient Load in the Owabi Reservoir and its Tributaries. 5th GSA One Day Research Seminar and Poster Presentations, 13th April, 2016, Artisan Training Center, CSIR-BRRI.
6. E.J Alorkpa and **NO. Boadi** (2016). Phytochemical Screening, Antimicrobial and Antioxidant Properties of Assorted Carica Papaya Leaves in Ghana. 5th GSA One Day Research Seminar and Poster Presentations, 13th April, 2016, Artisan Training Center, CSIR-BRRI.
7. Malik, S.A. Saah and **N.O. Boadi** (2013). Physicochemical and Microbial Properties of Sachet Water in the Kumasi Metropolis of Ghana. 5th International Toxicology Symposium in Africa, 12th -13th September, 2013, Kwame Nkrumah University of Science and Technology.
8. **NO. Boadi**, S.K. Twumasi, I. Osei, M. Badu and J.K. Mensah (2011). Levels of Fe,Zn,Mn,Pb and Hg in Canned Tomato Puree Marketed in Ghana. 27<sup>th</sup> Biennial Conference of the Ghana Science Association. 10<sup>th</sup>-15<sup>th</sup> July, 2011 Kwame Nkrumah University of Science and Technology, Kumasi. Ghana
9. **N.O Boadi** and M.A. Nkansah (2008). Water Quality assessment of drinking water in the Kumasi Metropolis of Ghana. 2<sup>nd</sup> College of Science Biennial research conference. 10<sup>th</sup> – 13<sup>th</sup> July, 2008, Chances Hotel, Ho.
10. **Boadi, N.O.**, Twumasi, S.K. and Ephraim, J.H. (2007). Impact of cyanide utilisation in mining on the environment: Bibiani as a case study. 16th Annual National Conference of the Ghana Chemical Society' University of Cape Coast, March 21-24, 2007.

## Grants and Awards

- KNUST Research Fund (KReF) awarded for project on Imidazole Derivatives as Potential Anti-Biofilm Agents and Inhibitors of Quorum Sensing (GHS 30000) in June 2020
- DANIDA Funded BSU pilot project on climate smart agriculture (\$10000) in November, 2016
- DANIDA Funded BSU pilot project on climate smart agriculture (\$10000) in November, 2015
- Beneficiary of one hundred and fifty thousand pound sterling (£150000.00) Leverhulme Trust-Royal Society Africa Award Scheme in 2010.
- Beneficiary of twelve thousand dollars (\$12000.00) Teaching and Learning Innovation Fund (TALIF-World bank) in 2004.

## **Reviewer of Journals**

- ACS Omega
- Dalton Transactions
- Environmental Monitoring and Assessment
- European Journal of Medicinal plants
- Food Chemistry
- Heliyon
- Inorganic and Nano-metal Chemistry
- International Journal of Biodiversity and Conservation
- International Journal of Environmental Research
- Journal of Chemistry
- Journal of Environmental and public Health
- Journal of Environmental Science and Health
- Journal of Food Science
- Lakes and Reservoirs
- MRS Advances
- Results in Physics
- RSC Advances
- Scientific African
- Surface Review and Letters
- Toxicology Reports
- Water Quality Research

## **Examiner/Assessor**

- Examiner, West African Examinations Council
- External Assessor (Promotion)- C.K.Tedam University of Technology and Applied Sciences, Navrongo
- External Assessor (Promotion)- Ghana Atomic Energy Commission, Accra
- External Assessor (Promotion)- Kumasi Technical University, Kumasi
- External Assessor (Promotion)- University for Development Studies, Tamale
- External Assessor (Promotion)- University of Energy and Natural Resources, Sunyani
- External Assessor (Promotion)- University of Ghana, Legon
- External Examiner, University of Ghana, Legon
- External Examiner, University of Zululand, South Africa
- External Moderator- All Nations University College
- External Moderator- Department of Chemical Sciences, University of Energy and Natural Resources, Sunyani
- External Moderator- Garden City University College
- External Moderator- Koforidua Technical University

## **Professional Development**

### **Skills - Instrumentation**

- Use of a range of UV-Visible spectrophotometer models
- Use of Bruker 400 and 300 NMR spectrometers
- Use of Bruker Alpha Platinum ATR FT-IR
- Use of Bruker D8 Discovery and Bruker D8 Advance X-ray diffractometers
- Use of glove box and schlenk line for the synthesis of air-sensitive materials
- Use of Philips CM 200 Transmission Electron Microscope
- Use of Philips XL 30 FEG Scanning Electron Microscope



### **Skills- Computer Literacy**

Knowledgeable and competent in the use of Microsoft Word, Microsoft PowerPoint, Microsoft Excel, Origin 8.5, ChemBioOffice 13, 2010, Graph Pad Prism 5 and Image J software.

### **Professional Membership**

- Ghana Science Association (Hon. National Secretary, 2019-2021)
- Ghana Science Association (President, Kumasi Branch, 2015-2019)
- Ghana Science Association (2014-date)
- Royal Society of Chemistry (e-member, 2012)
- Ghana Chemical Society (2007- date)

### **Committees/Boards/Other Services**

- Chairman- College of Science Procurement Committee (January 2023 to date)
- Chairman- Committee to draft policy for laboratory usage in the university (January-March, 2022)
- Member- College of Science Appointments and Promotions Sub-Committee (August 2022 to date)
- Member- University Policy Champions (November 2021 to date)
- Chairman- College of Science interview panel for SONSOL Project (February 2021 to date)
- Chairman- 9<sup>th</sup> KNUST Summer School Committee (October 2019 to September 2021)
- Member- Association of Commonwealth Universities Champions (November 2020 to date)
- Chairman- College of Science Excellence Awards Committee (August 2020 to 2021)
- Cognate Member- College Appointments and promotions Sub-Committee of the college of Agriculture and Natural resources (August 2020 to date)
- Chairman-College of Science Water Project Committee (December 2019)
- Graduate programmes coordinator (Department of Chemistry) (August 2016 – July 2018)
- Examinations Officer, Chemistry Department, KNUST (Jan 2009- Jul 2011)
- Vacation training officer (Aug. 2009- July 2018)

## Referees

1. Prof. Evans Adei  
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[eadei@yahoo.com](mailto:eadei@yahoo.com)  
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2. Prof. Johannes Awudza  
Department of Chemistry  
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