Gershon Amenuvor

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PROFILE

I received my BSc. honours degree in chemistry from the Kwame Nkrumah University of Science and Technology (KNUST) in 2011 and served as a teaching assistant in the department of chemistry (KNUST) for the 2011/2012 academic year. I taught chemistry in high school for one year and later enrolled for my MSc. degree in organometallic chemistry (synthesis and catalysis) from the University of Johannesburg (2013-2015), sponsored by the National Research Foundation (South Africa). I continued my studies in same university where obtained my PhD. degree in chemistry (organometallic chemistry and catalysis). My research focuses on design and synthesis of P, N, O and S donor ligands and their metal complexes for use as catalyst precursors for conversion of platform chemicals derived from biomass to value-added chemicals and fuels.

My PhD. research output had received both local and international recognition. E.g. Poster award for quality and originality of work at the 28th International Conference on Organometallic Chemistry (ICOMC) (Florence, Italy, 2018) and 1st Prize for Best Research Article within the Department of Chemistry (University of Johannesburg, South Africa, 2016).

I was privileged to be chosen for oral presentation funded by Royal Society of Chemistry at Pan African Chemistry Network congress (Nairobi, Kenya, 2018) on the topic: "Managing resources through chemistry: Wealth not waste"

RESEARCH

Interests	Organometallic/Coordination Chemistry and Catalysis
Areas	Inorganic Chemistry · Oncology · Materials Chemistry · Organic Chemistry · Biomedical Engineering · Molecular Biology

RESEARCH SUMMARY

20	307	8	7	1.31	19%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 20 publications listed below, 2015–2026. Field-weighted impact is the mean over the 16 works scored for it; 1.00 is the world average for works of the same field, type and year. 3 of the 16 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Lecturer 2020–present
Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Research Scientist 2019–2020
Industrial Processes Research Division, Council for Scientific and Industrial Research/ Institute of Industrial Research, Accra, Ghana

EDUCATION AND QUALIFICATIONS

PhD 2015–2018
Department of Chemistry, University of Johannesburg, Johannesburg, South Africa

MSc. 2013–2015
Chemistry, University of Johannesburg, Johannesburg, South Africa

BSc. Honours 2007–2011
Chemistry, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Individual Membership 2023–present
Federation of African Societies of Chemistry, Johannesburg, South Africa

Royal Society of Chemistry 2019–present
London, United Kingdom

Student Member 2017–2019
American Chemical Society, Washington, United States

Chemistry Facilitator (Community engagement program) 2017
Soweto Science Centre, University of Johannesburg, Johannesburg, South Africa

PUBLICATIONS

Journal articles 18

1. Juliana Mana Edor, **Gershon Amenuvor**, Phillimon Modisha, Dmitri Bessarabov (2026). Homogeneous catalysis in liquid organic hydrogen carriers: advances, challenges, and future directions. *Reaction Chemistry & Engineering*. https://doi.org/10.1039/d5re00486a
2. **Gershon Amenuvor**, Juliana Mana Edor, Phillimon Modisha, Dmitri Bessarabov, Banothile C. E. Makhubela (2026). The role of phosphorus in catalytic processes of hydrogen energy technology: a perspective. *RSC Advances*. https://doi.org/10.1039/d5ra10025a
3. **G Amenuvor**, CR Kwawu, FD Wireko-Manu (2025). Experimental and Theoretical Investigation of a Naphthyl-Based Saline Compound as a Multi-Anion Chemosensor. *Materials International*. https://materials.international/wp-content/uploads/2025/12/Materials74.040.pdf
4. Adetokunbo Temitope Famojuro, Patrice Kenfack Tsobnang, Loïc Landry Tchatchouang Tchouane, **Gershon Amenuvor**, James Darkwa, Omotayo A. Arotiba (2025). Influence of the Molecular Framework on the Photoconductivity Responses of Five Cu/Ni and Fe Heterometallic Materials Built with Cyanide and Ethylenediamine. *Crystal Growth & Design*. https://doi.org/10.1021/acs.cgd.5c00134
5. Francis Adu-Amankwaah, Ayesha Hussan, **Gershon Amenuvor**, Vuyo Mavumengwana, Lungile Sitole (2025). Metabolic reprogramming in malignant A375 cells treated with a ruthenium (II) complex: insights from GCxGC-TOF/MS metabolomics. *Metabolomics*. https://doi.org/10.1007/s11306-025-02221-7
6. Benjamin Effah Dankwa, Bismark Anabila Nyaaba, **Gershon Amenuvor**, Seth Obiri-Yeboah, Godfred Darko, Michael Konney Laryea, Lawrence Sheringham Borquaye (2024). Ecological risk assessment of selected pharmaceuticals in major rivers within Kumasi, Ghana. *Essential Chem*. https://doi.org/10.1080/28378083.2024.2421861
7. Ayesha Hussan, Brenden Moyo, **Gershon Amenuvor**, Debra Meyer, Lungile Sitole (2023). Investigating the antitumor effects of a novel ruthenium (II) complex on malignant melanoma cells: An NMR-based metabolomic approach. *Biochemical and Biophysical Research Communications*. https://doi.org/10.1016/j.bbrc.2023.149169
8. Adetokunbo T. Famojuro, Patrice T. Kenfack, **Gershon Amenuvor**, James Darkwa, Omotayo A. Arotiba (2023). Structural characterizations, optical and photo-electrochemical properties of four mixed-valence heterometallic coordination networks of alternating [Fe(CN)6]3/4− anions and [M(en)2·nH2O]2+ (M =

Cu2+, Ni2+; en = ethylenediammine) cations. *Acta Crystallographica Section A Foundations and Advances*. https://doi.org/10.1107/s2053273323084656

9. Emmanuel Pinto, Wilberforce Nkrumah Aggrey, Patrick Boakye, **Gershon Amenuvor**, Yen Adams Sokama-Neuyam, Michael Kwadwo Fokuo, Hassan Karimaie, Kwame Sarkodie, Caspar Daniel Adenutsi, Samuel Erzuah, Mizpah Ama Dziedzorm Rockson (2021). Cellulose processing from biomass and its derivatization into carboxymethylcellulose: A review. *Scientific African*. https://doi.org/10.1016/j.sciaf.2021.e01078
10. Michael Kwadwo Fokuo, Wilberforce Nkrumah Aggrey, Mizpah Ama Dziedzorm Rockson, Yen Adams Sokama-Neuyam, Patrick Boakye, **Gershon Amenuvor**, Kwame Sarkodie, Emmanuel Pinto, Hassan Karimaie (2021). Tannin-Based Deflocculants in High Temperature High Pressure Wells: A Comprehensive Review. *Advances in Chemical Engineering and Science*. https://doi.org/10.4236/aces.2021.114017
11. Zelinda Engelbrecht, Kim Elli Roberts, Ayesha Hussan, **Gershon Amenuvor**, Marianne Jaqueline Cronjé, James Darkwa, Banothile C.E. Makhubela, Lungile Sitole (2020). Synthesis and anti-cancer activity of bis-amino-phosphine ligand and its ruthenium(II) complexes. *Bioorganic & Medicinal Chemistry Letters*. https://doi.org/10.1016/j.bmcl.2020.127492
12. **Gershon Amenuvor**, Charles K. Rono, James Darkwa, Banothile C. E. Makhubela (2019). Multidentate Pyridyl-Aminophosphinite and Pyridyl-Phosphoramidite Ruthenium(II) Complexes: Synthesis, Structure and Application as Levulinic Acid Hydrogenation Pre-Catalysts. *European Journal of Inorganic Chemistry*. https://doi.org/10.1002/ejic.201900640
13. **Gershon Amenuvor**, James Darkwa, Banothile C. E. Makhubela (2018). Homogeneous polymetallic ruthenium(ii)^zinc(ii) complexes: robust catalysts for the efficient hydrogenation of levulinic acid to γ-valerolactone. *Catalysis Science & Technology*. https://doi.org/10.1039/c8cy00265g
14. Juliana M. Edor, **Gershon Amenuvor**, Collins Obuah, Alfred Muller, James Darkwa (2017). Synthesis and characterization of (pyrazolylethylphosphinite)nickel(II) complexes and catalytic activity towards ethylene oligomerization. *Applied Organometallic Chemistry*. https://doi.org/10.1002/aoc.4101
15. Juliana M. Edor, **Gershon Amenuvor**, Collins Obuah, Alfred Muller, James Darkwa (2017). Synthesis, characterization and coordination chemistry of (pyrazolylphosphinite)palladium(II) complexes. *Inorganica Chimica Acta*. https://doi.org/10.1016/j.ica.2017.11.058
16. **G Amenuvor** (2016). ACS Sustainable Chem. *Eng*. https://scholar.google.com/scholar?cluster=10331020127921853504&hl=en&oi=scholarr
17. **Gershon Amenuvor**, Banothile C. E. Makhubela, James Darkwa (2016). Efficient Solvent-Free Hydrogenation of Levulinic Acid to γ-Valerolactone by Pyrazolylphosphite and Pyrazolylphosphinite Ruthenium(II) Complexes. *ACS Sustainable Chemistry & Engineering*. https://doi.org/10.1021/acssuschemeng.6b01281
18. **Gershon Amenuvor**, Collins Obuah, Ebbe Nordlander, James Darkwa (2016). Novel pyrazolylphosphite–and pyrazolylphosphinite–ruthenium(ii) complexes as catalysts for hydrogenation of acetophenone. *Dalton Transactions*. https://doi.org/10.1039/c6dt02164f

Theses 2

1. **G Amenuvor** (2018). Ruthenium (II) complexes of Phosphorus-based mixed-donor Ligands as Catalysts for the Hydrogenation of Levulinic Acid to γ-Valerolactone. *PQDT-Global*. https://search.proquest.com/openview/4aac178ea1b99b257744f8df590d2dd7/1?pq-origsite=gscholar&cbl=2026366&diss=y
2. **G Amenuvor** (2015). Pyrazolyl Phosphite and Phosphinite Ruthenium (II) Complexes as Catalysts for Hydrogenation Reactions of Benzaldehyde, Acetophenone and Styrene. *PQDT-Global*. https://search.proquest.com/openview/4439ec50028cf34007994e2b5b8dbbbc/1?pq-origsite=gscholar&cbl=2026366&diss=y