

Yen Adams Sokama-Neuyam, Ph.D.

Department of Petroleum Engineering,
College of Engineering,
Kwame Nkrumah University of Science and Tech. (KNUST),
PMB Kumasi, Ghana.

[LinkedIn](#) | [Scholar](#) | [Profile](#)
ORCID: [000-0002-3402-0099](#)
Mail: asokama@knust.edu.gh
Tel: +233 245 937 358

Personal details

- Date of birth: 1st November 1985
- Nationality: Ghanaian
- Civil Status: Married

Education

Institution attended	Year	Degrees obtained / Specialisation
University of Stavanger, Norway	2013 - 2017	PhD Petroleum Engineering <i>Carbon Capture and Storage (CCS)</i>
University of Stavanger, Norway	2011 - 2013	MSc Petroleum Engineering <i>Reservoir Engineering</i>
Kwame Nkrumah University of Science and Technology, Ghana	2006 - 2010	BSc Petroleum Engineering

Professional Experience

November 2023 – Date	Head of Department , Department of Petroleum Engineering, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi.
January 2023 – Date	Principal Investigator , Net-Zero Carbon Emission Lab (NCEL), Kwame Nkrumah University of Science and Technology (KNUST), Kumasi.
August 2023 – Date	Senior Lecturer , Department of Petroleum Engineering, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi.
January 2025 – Date	Research Fellow , INTI International University, Persiaran Perdana BBN Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia.
January 2025 – Date	Editor – Environment and Geoscience Section , Scientific African Journal, Elsevier.
February 2019 – August 2023	Lecturer , Department of Petroleum Engineering, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi.
February 2016 – August 2017	Assistant Professor , Institute of Petroleum Technology, University of Stavanger (UiS), Norway.

Selected Publications

Peer reviewed Journals

1. Darkwah-Owusu, V., Yusof, M. A. M., **Sokama-Neuyam, Y. A.**, Fjelde, I., Nguku, A., Turkson, J. N., ... & Alakbari, F. S. (2025). Integrated Geochemical Modeling and Experimental Study of Acid Treatments for Enhancing CO₂ Injectivity: Implications for Geological CO₂ Storage. *Geoenergy Science and Engineering*, 213793. <https://doi.org/10.1016/j.geoen.2025.213793>
2. Turkson, J. N., Yusof, M. A. M., Fjelde, I., **Sokama-Neuyam, Y. A.**, & Darkwah-Owusu, V. (2024). Estimating Oil Recovery Efficiency of Carbonated Water Injection with Supervised Machine Learning Paradigms and Implications for Uncertainty Analysis. *Chemometrics and Intelligent Laboratory Systems*, 105303. <https://doi.org/10.1016/j.chemolab.2024.105303>
3. Darkwah-Owusu, V., Yusof, M. A. M., **Sokama-Neuyam, Y. A.**, Turkson, J. N., & Fjelde, I. (2024). A comprehensive review of remediation strategies for mitigating salt precipitation and enhancing CO₂ injectivity during CO₂ injection into saline aquifers. *Science of The Total Environment*, 175232. <https://doi.org/10.1016/j.scitotenv.2024.175232>
4. Andersen, P. Ø., Wojnarowski, P., **Sokama-Neuyam, Y. A.**, Le-Hussain, F., & Cai, J. (2024). Editorial of special issue "Advances in CCUS for the Natural Gas Industry". *Gas Science and Engineering*, 205463. <https://doi.org/10.1016/j.igsce.2024.205463>
5. Darkwah-Owusu, V., Md Yusof, M. A., **Sokama-Neuyam, Y. A.**, Turkson, J. N., & Fjelde, I. (2024). Assessment of Advanced Remediation Techniques for Enhanced CO₂ Injectivity: Laboratory Investigations and Implications for Improved CO₂ Flow in Saline Aquifers. *Energy & Fuels*. <https://doi.org/10.1021/acs.energyfuels.4c00949>
6. Turkson, J. N., Md Yusof, M. A., Fjelde, I., **Sokama-Neuyam, Y. A.**, Darkwah-Owusu, V., Tackie-Otoo, B. N., ... & Kwon, S. (2024). Carbonated Water Injection for Enhanced Oil Recovery and CO₂ Geosequestration in Different CO₂ Repositories: A Review of Physicochemical Processes and Recent Advances. *Energy & Fuels*. <https://doi.org/10.1021/acs.energyfuels.3c04423>
7. **Sokama-Neuyam, Y. A.**, Amezah, S. M., Adjei, S., Adenutsi, C. D., Erzuah, S., Quaye, J. A., ... & Sarkodie, K. (2024). Predictive modelling of energy-related greenhouse gas emissions in Ghana towards a net-zero future. *Greenhouse Gases: Science and Technology*. <https://doi.org/10.1002/ghg.2251>
8. **Sokama-Neuyam, Y.A.**, Yusof, M.A.M., Owusu, S.K. *et al* (2023). Experimental and theoretical investigation of the mechanisms of drying during CO₂ injection into saline reservoirs. *Sci Rep* **13**, 9155. <https://doi.org/10.1038/s41598-023-36419-3>
9. Nsiah-Gyambibi, R., **Sokama-Neuyam, Y.A.**, Boakye, P. *et al* (2023). Valorization of coal fly ash (CFA): a multi-industry review. *Int. J. Environ. Sci. Technol.* <https://doi.org/10.1007/s13762-023-04895-9>
10. Yusof M.A.M., **Sokama-Neuyam, Y.A.**, Ibrahim M.A., Saaid I.M., Idris A.K., Mohamed M.A. (2022). Experimental study of CO₂ injectivity impairment in sandstone due to salt precipitation and fines migration. *Journal of Petroleum Exploration and Production Technology*, SpringerLink (2022). <https://doi.org/10.1007/s13202-022-01453-w>
11. **Sokama-Neuyam, Y.A.**, Aggrey N. W., Boakye P., Sarkodie K, Oduro-Kwarteng S., Ursin J.(2021). The Effect of Temperature on CO₂ Injectivity in Sandstone Reservoirs. *Scientific African* 2021 (15) <https://doi.org/10.1016/j.sciaf.2021.e01066>
12. Asilevi P.J., Boakye P., Oduro-Kwarteng S., Fei-Baffoe B., **Sokama-Neuyam Y.A.**(2021). Indoor Air Quality Improvement and Purification by Atmospheric Non-Thermal Plasma (NTP). Preprint. <https://doi.org/10.21203/rs.3.rs-763141/v1>
13. **Sokama-Neuyam, Y.A.**, Boakye P., Aggrey N. W., Obeng N., Adu-Boahene F., Woo S. H., Ursin J.(2020). Theoretical Modeling of the Impact of Salt Precipitation on CO₂ Storage Potential in Fractured Saline Reservoirs. *ACS Omega* 2020 5 (24), 14776-14785. <https://dx.doi.org/10.1021/acsomega.0c01687>
14. **Sokama-Neuyam, Y.A.**, Adu-Boahene F., Boakye P., Aggrey N. W., Ursin J. Theoretical modeling of the effect of temperature on CO₂ injectivity in deep saline formations. *Greenhouse Gases: Science and Technology*, 10: 4 - 14 (2020). <https://doi.org/10.1002/ghg.1951>
15. **Sokama-Neuyam, Y.A.**, Ursin J., Boakye P (2019). Experimental Investigation of the Mechanisms of Salt Precipitation during CO₂ Injection in Sandstone. *C: Journal of Carbon Research*, MDPI, C 2019, 5(1),4. <https://doi.org/10.3390/c5010004>

16. **Sokama-Neuyam, Y.A.**, Ursin J (2018). The Coupled Effect of Salt Precipitation and Fines Mobilization on CO₂ Injectivity in Sandstone. *Greenhouse Gases: Science and Technology*, 00: 1 - 13 (2018). <https://doi.org/10.1002/ghg.1817>
17. **Sokama-Neuyam, Y.A.**, Ursin J., Ginting P., Timilsina B (2017). The Impact of Fines Mobilization on CO₂ injectivity: An Experimental Study. *International Journal of Greenhouse Gas Control*, (65) 195-202. <https://doi.org/10.1016/j.ijggc.2017.08.019>

Book Chapters

Sokama-Neuyam, Y. A., Yusof, M. A., & Owusu, S. K. (2022). CO₂ Injectivity in Deep Saline Formations: The Impact of Salt Precipitation and Fines Mobilization. *Carbon Sequestration*. IntechOpen. <https://doi.org/10.5772/intechopen.104854>

Conference Presentations

1. Darkwah-Owusu, V., Yusof, M. A. M., **Sokama-Neuyam, Y. A.**, Tackie-Otoo, B. N., Turkson, J. N., Radzali, I. B., ... & Fjelde, I. (2024). Experimental Investigation of the Impact of Low Salinity Water and Hydrochloric Acid Solutions as Halite Precipitation Reduction Agents for Enhancing CO₂ Injectivity in Deep Saline Aquifers. *Offshore Technology Conference, Asia*.
2. Darkwah-Owusu, V., Md Yusof, M. A., **Sokama-Neuyam, Y. A.**, Tackie-Otoo, B. N., Turkson, J. N., Kwon, S., ... & Fjelde, I. (2024). Investigating the Extent of the Impact of Acetic Acid as Halite Precipitation Reduction Agent for Enhancing CO₂ Injectivity in Deep Saline Aquifers. *SPE International Conference and Exhibition on Formation Damage Control*.
3. Mardhatillah, M. K., Md Yusof, M. A., Sa'id, A. A., Mohammad F., Iqmal I., **Sokama Neuyam, Y. A.**, and Nur A. M. A. (2022). "Predictive Modelling of Carbon Dioxide Injectivity Using SVR-Hybrid." *Offshore Technology Conference Asia, Virtual and Kuala Lumpur, Malaysia*.
4. Shaibu R, **Sokama-Neuyam, Y.A.**, Ursin J (2018). A Theoretical Study of the Effect of Salt Precipitation on CO₂ Injectivity. *SPE International Conference and Exhibition on Formation Damage Control*, 7-9 February, Lafayette, Louisiana, USA.
5. **Sokama-Neuyam, Y.A.**, Ursin J (2017). Experimental Investigation of the Impact of Salt Precipitation on CO₂ Injectivity. *International Symposium of the Society of Core Analysts*, 27-30 August, Vienna, Austria.
6. **Sokama-Neuyam, Y.A.**, Ursin J (2015). CO₂ Well Injectivity: Effect of Viscous Forces on Precipitated Minerals. *International Petroleum Technology Conference*, 6-9 December, Doha, Qatar.
7. **Sokama-Neuyam, Y.A.**, Ursin J (2015). The Effect of Mineral Deposition on CO₂ Well Injectivity. *SPE EUROPEC Conference*, 1-4 June, Madrid, Spain.
8. Fjelde I., Omekeh A. V., **Sokama-Neuyam Y. A** (2014). Low Salinity Water Flooding: Effect of Crude Oil Composition. *SPE Improved Oil Recovery Symposium*, 12-16 April, Tulsa, Oklahoma, USA.

Invited Technical Talks

January 2025	Transitioning KNUST from Green Campus to a Green University: Progress and Prospects. <i>TU Delft Global Lunch, Delft Netherlands</i> .
October 2024	Modelling and Comparative Analysis of the Carbon Intensity of Selected Oil and Gas Fields in Ghana Towards a Net-Zero Future. <i>Local Content Conference and Exhibitions, Takoradi</i> .
March 2024	Predictive Modelling of Ghana's Energy Consumption and Corresponding Greenhouse Gas Emissions Towards a Net-zero Future. <i>GhIE Annual General Meeting and Conference, Accra</i> .
February 2024	Energy-related Greenhouse Gas Emissions: A Data-driven Path to Net-Zero, <i>Climate Compatible Growth Workshop, Kumasi</i> .
December 2023	Leveraging Oil and Gas for a Just Transition Towards a Net-Zero Future, <i>SPE Technical Lecture, Webinar</i> .
November 2023	Building a Robust Research Ecosystem to Drive Africa's Transition to Net-Zero, <i>A Pre COP 28 Technical Workshop, Accra</i> .
August 2023	Ghana's Greenhouse Gas Emission: A Data-Driven Path to Net-Zero, <i>KNUST Young Researchers' Forum Research Café, Webinar</i> .