

CURRICULUM VITAE

Personal Information

First name/middle/surname: Emily Chelangat Ngeno

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Date of birth: 26th November 1981

Nationality: Kenyan



Biography

Emily Ngeno is a tutorial fellow in Kaimosi Friends University and holds a PhD in Chemistry. Her study areas include environmental, inorganic, organic, analytical and physical chemistry.

Education background

2018-2024: **Masinde Muliro University of Science and Technology**

Doctor of Philosophy (Chemistry)

2012-2016: **Masinde Muliro University of Science and Technology**

Master of Science in Chemistry

2001 – 2005: **Kenyatta University**

Bachelor of Education (Science) Chemistry and Mathematics

Professional background

Jan 2021- Current: Kaimosi Friends University, Lecturer

Jan 2018- 2021: Kaimosi Friends University, tutorial fellow (part-time)

Jan 2014-2020: MMUST part time tutorial fellow

Sept 2007-October 2012: Eor Ekule Secondary School (TSC teacher)

Work Experience

(a) **University courses taught:** Chemistry laboratory technician; Tutor for Chemistry Bridging Course; Physical sciences (DND 051); Inorganic chemistry (SCH 111), Fundamentals of Chemistry I (SCH 100); Fundamentals of Chemistry II (SCH 101); Analytical Chemistry I (SCH 120); Organic Chemistry I (SCH 130); Comparative study of s and p block elements (SCH 210); Instrumental Methods in Chemical Analysis (SCH 221); Basic Chemical Thermodynamics (SCH 240); Chemical kinetics (SCH 341); Comparative study of D block elements (SCH 311); Environmental Chemistry (SCH 350); Radiation and Nuclear Chemistry (SCH 312); Industrial Electrochemistry (SCI 360), Coordination Compounds and Organometallic Chemistry (SCH 410); and Industrial Chemistry (SCH 400).

- (b) **Secondary School responsibilities:** Head of Science Department; Boarding Mistress; Class Teacher; Teacher of Chemistry/Mathematics; Judge in Science Congress; Member Tendering Committee.

List of Publications

(a) Articles in peer reviewed journals

1. Douglas Bukhebi Sifuna, Anthony Pembere, Silas Lagat, Godfrey Barasa, Timothy Manda, **Emily Ngeno**, Patrick Ssebugere, Christine Betty Nagawa, Christine Kyarimpa and Solomon Omwoma (2025). Acaricides in Agriculture: Balancing Livestock Health and Environmental Well-being in Trans-Nzoia County, Kenya. *Environmental Science and Pollution Research*.
2. Fred Sifuna Wanyonyi, Francis Orata, Ponnadurai Ramasami, **Emily Ngeno**, Victor Shikuku, Robert O. Gembo, Gershom Kyalo Mutua and Anthony Pembere (2025). Unlocking the adsorptive effectiveness of naturally occurring heulandite zeolite for the removal of PO_4^{3-} and NO_3^- anions from wastewater. *Environmental Monitoring and Assessment*, 197:78.
3. Hermann Tamaguelon Dzoujo, Victor Odhiambo Shikuku b, Sylvain Tome, Aurelle Clandy Ntinkam Simo, **Emily C. Ngeno**, Zachary M. Getenga, Marie Annie Etoh, and David Daniel Joh Dina (2024). Recent advances in metal oxide-biochar composites for water and soil remediation: A review. *Hybrid Advances*, 100292.
4. **Emily Ngeno**, Roselyn Ongulu, Victor Shikuku, Deo Ssentongo, Benton Otieno, Patrick Ssebugere, Francis Orata (2024). Response Surface Methodology Directed Modeling of the Biosorption of progesterone onto acid activated Moringa Oleifera seed biomass: Parameters and Mechanisms. *Chemosphere*, 142457.
5. Timothy Manda, Solomon Omwoma, Godfrey Okumu Barasa, Anthony M. Pembere, Douglas Sifuna, Livingstone Ochilo, Silas Lagat, **Emily Ngeno**, Patrick Ssebugere, Christine Betty Nagawa, and Christine Kyarimpa (2024). Sorption Mechanisms and Enhancement of Selected Organochlorine Pollutants in Water on Zeolites. *Journal of Chemistry*, 4008315.
6. **Emily Ngeno**, Roselyn Ongulu, Francis Orata, Henry Matovu, Victor Shikuku, Richard Onchiri, Abel Mayaka, Eunice Majanga, Zachary Getenga, Joel Gichumbi, Patrick Ssebugere (2023). Endocrine disrupting chemicals in wastewater treatment plants in Kenya, East Africa: Concentrations, dissipations, mass loading rates and ecological impacts. *Environmental Research*, 237, 117076.
7. **Emily Chelangat Ngeno**, Kinyua E. Mbuci, Mohamed Chaker Necibi, Victor Odhiambo Shikuku, Chijioke Olisah, Roselyn Ongulu, Henry Matovu, Patrick Ssebugere, Almotasembellah Abushaban, Mika Sillanpää (2022). Sustainable re-utilization of waste materials as adsorbents for water and wastewater treatment in Africa: Recent studies, research gaps, and way forward for emerging economies. *Environmental Advances*, 9, 100282.
8. Juma John Moses Abayi, Christopher Tombe Gore, Christine Nagawa, Benjamin A. Musa Bandowe, Henry Matovu, Edward Mubiru, **Emily Chelangat Ngeno**, Silver Odongo, Mika Sillanpää (2021). Polycyclic aromatic hydrocarbons in sediments and fish species from the

White Nile, East Africa: Bioaccumulation potential, source apportionment, ecological and health risk assessment. *Environmental pollution*, 278, 116855.

9. Stuart Ben Mukiibi, Steven Allan Nyanzi, Justus Kwetegyeka, Chijioke Olisah, Adewale Matthew Taiwo, Edward Mubiru, Emmanuel Tebandeke, Henry Matovu, Juma John Moses Abayi, **Emily Chelangat Ngeno**, Mika Sillanpää, Patrick Ssebugere (2020). Organochlorine pesticide residues in Uganda's honey as a bioindicator of environmental contamination: Reproductive health implications to consumers. *Ecotoxicology and Environmental Safety*, 214, 112094.
10. Patrick Ssebugere, Mika Sillanpää, Henry Matovu, Zhanyun Wang, Karl-Werner Schrammg, Solomon Omwoma, William Wanasolo, **Emily Chelangat Ngeno**, Silver Odongo (2020). Environmental levels and human body burdens of per- and poly-fluoroalkyl substances in Africa: A critical review. *Science of the Total Environment*, 739, 139913.
11. **Emily C. Ngeno**, Victor O. Shikuku, Francis Orata, Lilechi D. Barazaa and Selly J. Kimosop (2019). Caffeine and Ciprofloxacin Adsorption from Water onto clinoptilolite: Linear isotherms, Kinetics, Thermodynamic and Mechanistic studies. *South African Journal of Chemistry*, 72, 136-142.
12. Victor O. Shikuku, George O. Achieng', **Emily Ngeno**, George M. Okowa, Gloria Matsitsa (2017). Distribution and removal efficiency of heavy metals by a conventional activated sludge at a municipal wastewater treatment plant in Kisumu city, Kenya. *Research Journal of Chemical Sciences*, 7(8), 19-25.
13. **Emily C. Ngeno**, Francis Orata, Lilechi D. Baraza, Victor O. Shikuku, and Selly J. Kimosop (2016). Adsorption of Caffeine and Ciprofloxacin onto pyrolytically derived water hyacinth; Isothermal, kinetics and thermodynamic studies. *Journal of Chemistry and Chemical Engineering*, 10, 185-194.

(b) Book chapters

1. Victor O. Shikuku, **Emily C. Ngeno**, Joel B. Njewa and Patrick Ssebugere (2022). "Pharmaceutical and personal care products (PPCPs) and per- and polyfluoroalkyl substances (PFAS) in East African water resources: progress, challenges, and future". <https://doi.org/10.1515/psr-2022-0124>.
2. Winnie Nyairo, **Emily C. Ngeno**, Victor Shikuku and Patrick Ssebugere (2020). "Application of Metal-organic framework Adsorbents for Water defluoridation" submitted to "Emerging Applications and Implementations of Metal-Organic Frameworks" ISBN13: 9781799847601. DOI: 10.4018/978-1-7998-4760-1.
3. **Emily C. Ngeno** and Victor Shikuku (2020). "Emerging Contaminants; Pollution control and Abatement" submitted to "Effects of Emerging Chemical Contaminants on Water Resources and Environmental Health" in IGI Global publishers. ISBN13: 9781799818717. DOI: 10.4018/978-1-7998-1871-7.

(c) Theses

1. **PhD: Emily C. Ngeno**. Investigation of the Occurrence, Biosorption, and Phytoremediation of Selected Endocrine Disrupting Chemicals from Wastewater using *Moringa oleifera* and *Eichhornia crassipes* (2024).
2. **MSc: Emily C. Ngeno**. Environmental Levels of Selected Pharmaceuticals (Lake Victoria Catchment Area, Kenya) and their Adsorption onto Natural Zeolite and Water Hyacinth Biochar (2016).

Conferences and Workshops

1. 3rd Commonwealth Chemistry Congress 2025. Topic: Response Surface Methodology Directed Modelling of the Biosorption of Progesterone onto acid-activated *Moringa oleifera* seed biomass: Parameters and Mechanisms; Stellenbosch, South Africa.
2. Capacity Building Workshop for Effective Supervision and Mentorship of Female Postgraduates in Science, Technology, Engineering and Mathematics. 27th Feb. 2025.
3. Kaimosi Friends University 2nd National Virtual Conference 2024. Topic: Response Surface Methodology Directed Modeling of the Biosorption of Progesterone onto acid-activated *Moringa oleifera* seed biomass: Parameters and Mechanisms.
4. Masinde Muliro University of Science and Technology 17th International Multi-Disciplinary Blended Conference, 2024. Topic: Response Surface Methodology Directed Modeling of the Biosorption of Progesterone onto acid-activated *Moringa oleifera* seed biomass: Parameters and Mechanisms.
5. Kaimosi Friends University 2023 Conference. Topic: Endocrine Disrupting Chemicals in Wastewater Treatment Plants in Kenya, East Africa: Concentrations, Dissipations, Mass Loading Rates and Ecological Impacts.
6. 3rd DIFENEW International Student Conference (DISC2023). Topic: Occurrence, Biosorption and Phytoremediation of selected Endocrine Disrupting Chemicals from Wastewater using *Moringa oleifera* and *Eichhornia crassipes*.
7. GC-MS Training: A Hands-on Approach. 21st June-25th June 2021. Jomo Kenyatta University of Agriculture and Technology, Kenya.
8. Research writing in the Sciences (2020). An online module offered by the Organization for Women Scientists for the Developing World (OWSD) in collaboration with AuthorAid.
9. Academic Writing Skills (2020). An online module offered by AuthorAid.
10. Research Writing in the Sciences (2019). An online module offered by inasp AuthorAid.
11. LC-MS Training: A Hands-on Approach. 19th-23rd August 2019. Jomo Kenyatta University of Agriculture and Technology, Kenya.
12. Catalysis Chemistry and its Application. 17th -25th January 2019 at the Department of Pure and Applied Chemistry, MMUST.
13. Strengthening of Mathematics and Sciences for Secondary Schools. August holiday trainings attended between 2006-2010.
14. Science Congress Judges workshops held between 2010 and 2011.
15. Mathematics Contest Training in Mangu High School (2011).

Grants, Fellowships and Awards

1. Austrian Partnership Programme in Higher Education and Research for Development-Environmental Chemistry for Sustainable Development (APPEAR-ECSDevelop) Project (2022).
2. AGNES-PAWS Mobility grant to Makerere University (2021).
3. International Foundation of Science Basic research grant (2021).
4. Mawazo PhD scholars fellowship programme (2021); Mawazo Cycle 1 and 2 Funding (2022).
5. Organization for Women Scientists for the Developing World fellowship Award (2019). Sandwich Programme to Makerere University.
6. Small Grants for Theses and Dissertations (2014/2015) offered by The association of African Universities (AAU).

Membership

1. Kenya Chemical Society.
2. Organization for Women scientists for the Developing World (OWSD).
3. Royal Society of Chemistry.

Community Service and Charities involved in:

1. Winnie Augo Foundation for the needy in the society.
2. The Mater Heart Run held yearly.
3. Women, Youth and Children Church leadership.

Referees

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