



KENYATTA UNIVERSITY
DEPARTMENT OF CHEMISTRY
PUBLICATION LIST FOR 2019 AND 2020

2019

1. Lucy Akinyi Aduda, **Henry Mwangi, Sauda Swaleh and Wilson M Njue***(2019). Assessment of Potential Human Exposure to Arsenic in Imported and Locally Produced Rice in Kenya. *EC Nutrition* **14.11 (2019): 86-95.**
2. Kithokoi J. Kilonzo, Lawrence Ochoo, John M. Maingi, **Sauda Swaleh, Wilson M. Njue** (2019). Green Sonochemical Biosynthesis of Silver Nanoparticles Using *Brideria mycrantha bark extract* and Their Antibacterial Activity. *African Journal of Pure and Applied Chemistry*, Vol. **13(3): 34-42; ISSN: 1996 – 0840**
3. Belinda Nasike Siangu, **Swaleh Sauda**, Mwonjoria Kingori John and **Wilson Mbiti Njue** (2019). Antioxidant activity, total phenolic and flavonoid content of selected Kenyan medicinal plants, sea algae and medicinal wild mushrooms. *African Journal of Pure and Applied Chemistry*, Vol. **13(3): 43-48; ISSN: 1996 – 0840**
4. Grace Kiriro, **Isaac Mwangi, Sauda Swaleh, Ruth Wanjau**, Paul Mbugua, and Jane Catherine Ngila (2019), Remediation of degraded soils with hydrogels from domestic animal wastes. *International Journal of Recycling of Organic Waste in Agriculture (242): DOI: 10.1007/s40093-019-0242-1*
5. **Isaac Mwangi**, Gerald Mbugua, **Ruth Wanjau, Swaleh Sauda**, Titus Msagati, Jane Catherine Ngila (2019), Removal of Flouride Ions in Stored Drinking Water by Triethylamine Chemically Modified Polyethylene Containers, *Journal of Environmental Research (2019) 13;175-184. https://doi.org/10.1007/s41742-018-0163-2.*
6. G. N. Kiriro, **I. W. Mwangi, S, Swaleh, R. Wanjau**. P. Mbugua and J. C. Ngila (2019). Use of Nutrient Anchored Polystyrene Substrate Soilless Material for Growth of Crops, *International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET) 6(4): 151-163.*
7. **Isaac Mwangi**, Gerald Mbugua, **Ruth Wanjau**, Titus Msagati & Jane Catherine Ngila (2019). Removal of Flouride Ions in Stored Drinking Water by Triethylamine Chemically Modified Polyethylene Containers, *International Journal of Environmental Research (Int. J Environ Res) 13(1): 175-184. https://doi.org/10.1007/s41742-018-0163-2*
8. Peterson Mutembei Kugeria, **Isaac Waweru Mwangi**, Jackson Wachira Muthengia, Peter Waithaka Njoroge (2019) Monitoring the extraction of copper from chicken dung leachate using analuminium electrode as an indicator, *Heliyon* **5 1-9.**
9. Mathew K. Arap Tonui, **Isaac W. Mwangi, Ruth Wanjau** (2019) Recovery of Zn²⁺, Fe²⁺ and Mn²⁺ from Some Selected Edible Vegetables and Pumpkin using Modified Maize Cobs

10. Adamu Abdulhameed, **Harun M. Mbuvi, Evans O. Changamu, Francis M. Maingi** (2019), *Microwave synthesis of Carboxymethylcellulose (CMC) from Rice Husk. IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736.* Volume 12, Issue 12 Ser. I (December. 2019), PP 33-42 www.iosrjournals.org
11. F Maingi, **M Mwihaki Ng'ang'a, HM Mbuvi, H Mwangi**, (2019) Clay-Rice Husk Ash based Geopolymers for Remediation of Pb (II) and Cd (II) from Wastewater, **Egerton Journal of Science and Technology** 17 (1-139), 15-28.
12. Josephine E. Mwihaki, **Harun Mbuvi, Margaret Mwihaki**, (2019) Derivatization of Papyrus Reeds for Use as a Super Absorbance Mulch Substrate, *International Journal of Science and Research (IJSR)* 8 (3), 1353 – 1363.
13. Margaret W Kariuki, Ahmed Hassanali, **Margaret M Ng'ang** (2019). Structure-activity Studies on Analogues of 4-methylguaiaicol, a Cattle Anal Odour Constituent Repellent to the Brown Ear Tick (*Rhipicephalus Appendiculatus*. *Acta Tropica*; 194:78-81 PMID: 30922799. DOI: 10.1016/j.actatropica.2019.03.025.
14. Ngari Ann G, Omolo Maurice V, Tarus Paul K, **Ng'ang'a Margaret M**, and Hassanali Ahmed (2019). Chemical compositions of fresh volatiles aromas of some Kenyan *Ocimum* species. *Journal of Pharmacognosy and Phytochemistry*; 8(6): 201-208.
15. Ngari Ann G, Omolo Maurice V, Tarus Paul K, **Ng'ang'a Margaret M** and Hassanali Ahmed Chemical compositions of essential oils of some Kenyan *Ocimum* species. *American Journal of Essential Oils and Natural Products* 2019; 7(3): 17-26.
16. T. J. Shikorire G. O. Asudi, **M. M. Ng'ang'a**, G. Kirubi & A. Hassanali (2019). Analysis of emission profiles from charcoal produced from selected tree species by different pyrolysis methods. *International Journal of Environmental Science and Technology* volume 16, 5995-6004.
17. S. N. Nyamu, L. Ombaka, **E Masika and M. Ng'ang'a** (2019), One pot microwave assisted synthesis of size dependent glutathione capped spherical silver nanoparticles suitable for materials with antibacterial properties, *Interdisciplinary Nanomedicine* Volume 4 Issue 3 86-94.
18. Abunah D, Onindo C, Andala D, Ochoti E (2019). Physico-chemical removal of heavy metals from contaminated water using recyclable montmorillonite cellulose nanocomposite, *J. Mater. Environ. Sci.*, 10(12), 1349-1361(ISSN : 2028-2508 CODEN : JMESC�)
19. Jackson Muthengia Wachira ,1 **Joseph Karanja Thiong'o**,2 Joseph Mwitii Marangu ,3 and Leonard Genson Murithi Physicochemical Performance of Portland-Rice Husk Ash-Calcined Clay-Dried Acetylene Lime Sludge Cement in Sulphate and Chloride Media, *Hindawi, Advances in Materials Science and Engineering* Volume 2019, Article ID 5618743, 12 pages <https://doi.org/10.1155/2019/5618743>.
20. Joseph Mwitii Marangu, **Joseph Karanja Thiong'o**, and Jackson Muthengia Wachira, Review of Carbonation Resistance in Hydrated Cement Based Materials, *Hindawi, Journal of Chemistry*, Volume 2019, Article ID 8489671, 6 pages.
21. Festus Ngui Musyimi, Jackson Muthengia Wachira, **Joseph Karanja Thiong'o**, and Joseph Mwitii Marangu (2019), Performance of Ground Clay Brick Mortars in Simulated Chloride and Sulphate Media, *Hindawi Journal of Engineering* Volume 2019, Article ID 6430868, 12, <https://doi.org/10.1155/2019/6430868>.

22. Mutitu, Daniel Karanja , Wachira, Jackson Muthengia, Mwirichia, Romano, **Thiong'o, Joseph Karanja**, Munyao, Onesmus Mulwa , Muriithi, Genson, (2019), Influence of *Lysinibacillus sphaericus* on compressive strength and water sorptivity in microbial cement mortar, Crossref DOI link: <https://doi.org/10.1016/J.HELIYON.2019.E02881> .
23. Protus Nalobile, Jackson Muthengia Wachira, **Joseph Karanja Thiong'o**, and Joseph Mwiti Marangu (2019) Pyroprocessing and the optimum mix ratio of rice husks, broken bricks and spent bleaching earth to make pozzolanic cement, *Heliyon*. 2019 Sep; 5(9): e02443. doi: [10.1016/j.heliyon.2019.e02443](https://doi.org/10.1016/j.heliyon.2019.e02443), PMID: PMC6739460
24. Karanja D. Mutitu, Mulwa O. Munyao, Muthengia J. Wachira, Romano Mwirichia, **Karanja J. Thiong'o** & Mwiti J. Marangu (2019): Effects of biocementation on some properties of cement-based materials incorporating *Bacillus* Species bacteria – a review, *Journal of Sustainable Cement-Based Materials*, DOI: [10.1080/21650373.2019.1640141](https://doi.org/10.1080/21650373.2019.1640141).
25. Onesmus Mulwa Munyao, **Joseph Karanja Thiong'o**, Jackson Muthengia Wachira, Daniel Karanja Mutitu, Mwirichia Romano, Genson Muriithi, Use of *Bacillus* Species Bacteria in Protecting the Concrete Structures from Sulphate Attack-A Review, *Journal of Chemical Reviews*, 2019, 1(4), 287-299.
26. Joseph Mwiti Marangu, Kyle Riding, Anfal Alaibani, Abla Zayed, **Joseph Karanja Thiong'o** and Jackson Muthengia Wachira Potential for Selected Kenyan Clay in Production of Limestone <https://www.researchgate.net/publication/337006083>
27. Joseph Mwiti Marangu, **Joseph Karanja Thiong'o**, and Jackson Muthengia Wachira (2019), Review of Carbonation Resistance in Hydrated Cement Based Materials, *Hindawi Journal of Chemistry* Volume 2019, Article ID 8489671, 6 pages <https://doi.org/10.1155/2019/8489671>
28. Marangu J. Mwiti, **Thiong'o J. Karanja**, Wachira J. Muthengia (2019), Properties of activated blended cement containing high content of calcined clay, *Heliyon* 4 (2018)e00742 doi: [10.1016/j.heliyon.2018.e00742](https://doi.org/10.1016/j.heliyon.2018.e00742)
29. Jackson Muthengia Wachira, **Joseph Karanja Thiong'o**, Joseph Mwiti Marangu and Leonard Genson Muriithi (2019), Physicochemical Performance of Portland-Rice Husk Ash-Calcined Clay-Dried Acetylene Lime Sludge Cement in Sulphate and Chloride Media, *Hindawi Advances in Materials Science and Engineering* Volume 2019, Article ID 5618743, 12 pages <https://doi.org/10.1155/2019/5618743>
30. Wasike P. W., **Nawiri M. P.**, **Wanyonyi A. A.** (2019). Levels of Heavy Metals (Pb, Mn, Cu and Cd) in Water from River Kuywa and the Adjacent Wells. *Environment and Ecology Research* 7(3): 135-138, 2019 <http://www.hrpub.org> DOI: [10.13189/eer.2019.070303](https://doi.org/10.13189/eer.2019.070303).
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32. Wakhanu, J., Nyambaka, H., Kimiywe, J., **Nawiri, M** and Thagana, W.M. (2019). Consumption of African Indigenous Vegetables Improves Children's body Fat Free Mass in Machakos County, Kenya, *Journal of Food Science and Engineering* 9 305-317 doi: [10.17265/2159-5828/2019.08.002](https://doi.org/10.17265/2159-5828/2019.08.002)

33. Ngolo P., **Nawiri M.**, Machocho A, and Oyieke H (2019). Pesticide Residue Levels in Soil, Water, Kales and Tomatoes in Ewaso Narok Wetland, Laikipia, County, Kenya *Journal of Scientific Research & Reports* 24(5): 1-11; Article no.JSRR.48243 ISSN: 2320-0227
34. Kihagi RW, Amuka O, **Machocho AK, Wafula AW** (2019). Phytomedicine and Allied Compounds in Both Human and Animal Healthcare. *Biomedical Journal of Scientific and Technical Research* 14(2).
35. **Murungi, J.I.**, Oyiengo,E.W. and **Wanjau., R. N.** (2019) Assessment of Sodium Benzoate in Tomato Sauces in Supermarkets in Nairobi Kenya: Proceedings of International Food Safety Conference (Kenyatta University , Kenya (May 20-24.2019, pages 47-48.
36. Odhimbo, K., **Murungi, J., Wanjau, R.** and Noah , N. (2019) The Effect of *Croton Macrostachyus*, *Plectranthus barbatus* Leaf Aqueous Extracts and Inorganic Fertilizers on Growth and Nutrients Concentration of *Brassica oleracea* L. in a Greenhouse at Nairobi, *Asian Journal of Agricultural Extension, Economics and Sociology* 29(3): 1-10

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1. **Wilson Njue**, Jackson Kilonzo Kithokoi, **Sauda Swaleh, Jane Mburu, Henry Mwangi** (2020). Green ultrasonic synthesis, characterization and antibacterial activity of Silver and Gold Nanoparticles mediated by *Ganoderma lucidum* extract. *Journal of Applied Chemistry Material Science & Engineering Research, Vol.4 (2): 1-7*; ISSN: 2689–1204
2. **Wilson Njue**, Jackson Kilonzo Kithokoi, **Jane Mburu, Henry Mwangi, Sauda Swaleh** (2020). Green Sonochemical Synthesis of Silver Nanoparticles Using *Adansonia Digitata* Leaves Extract and Evaluation of Their Antibacterial Potential. *European Journal of Advanced Chemistry Research, Vol.(2): 41-45*, DOI: <http://dx.doi.org/10.24018/ejchem.2020.1.2.5>.
3. Njue Martin, **Mbuvi Harun***, **Margret Nga'nga'**, Mbugua Gerald (2020). Using Cilantro (*Coriandrum Sativum*) to Remove Cadmium from Contaminated Water, *World Environment* 2020, 10(1): 1-9 DOI: 10.5923/j.env.20201001.01.
4. Adamu Abdulhameed, **Harun M. Mbuvi, Evans O. Changamu.** (2020), *Synthesis of Cellulose-Based Superabsorbent Hydrogel from Rice Husk Using a Microwave.* *American Journal of Materials Science* 2020, 10(1): 1-8 DOI: 10.5923/j.materials.20201001.01.
5. Echessa A.C. Peter, **Nyambaka Hudson, Changamu Evans** (2019), Ameliorating Sisal Leaf Wastes In Purveying Plant Macronutrients, *International Journal of Research and Analytical Reviews (IJRAR)*, Volume 6, Issue 4, 87- 93.
6. Essoung, F.R.E., Tadjong, A.T., **Chhabra, S.C.**, Mohamed, S.A. and Hassanali, A (2020). Repellence and fumigant toxicity of essential oils of *Ocimum gratissimum* and *Ocimum kilimandscharicum* on *Tuta absoluta* (Lepidoptera: Gelechiidae) *Environmental Science and Pollution Research* 2020 <https://doi.org/10.1007/s11356-020-09773-2>.
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9. Juliet Ochola, Laura Cortada, **Margaret Ng'ang'a**, Ahmed Hassanali, Danny Coyne and Baldwin Torto (2020). Mediation of Potato–Potato Cyst Nematode, *G. rostochiensis* Interaction by Specific Root Exudate Compounds. **Frontier Plant Science.**, 10 June, 2020 <https://doi.org/10.3389/fpls.2020.00649>.
10. Peter Muchoki Githinji, Jeremiah Waweru Gathirwa, **Margret Mwihaki Ng'ang'a**, Alex King'ori Machocho, (2020). Triterpenoids from *Grewia plagiophylla*. **Pharmacogn. Commn.** 2020;10(2):102-107.
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12. Tapera, M., **Wanjau, R.**, Dzomba, P., **Machocho, A. K.**, & **Mburu, J.** (2020). Phytochemical study to validate the ethnobotanical importance of *Dioscorea steriscus* tubers obtained from Zimbabwe, **STED Journal**, 2(1), 1-10. DOI: 10.7251/STED2002001T.
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14. Kevin Otieno Okoth, **Ruth Nduta Wanjau**, Maurice Otieno Odago, Semiconductor Nanocomposites-Based Photoelectrochemical Aptamer Sensors for Pharmaceuticals Detection (2020) Chapter 7, Pg. 109 -132 of Effects of Emerging Chemical Contaminants on Water Resources and Environmental Health, author Victor Shikuku in the IGI Global book series Advances in Environmental Engineering and Green Technologies (AEEGT) (ISSN: 2326-9162; eISSN: 2326-9170)
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20. Onesmus Mulwa Munyaoa,, **Joseph Karanja Thiong'o**, Jackson Wachira Muthengia, Daniel Karanja Mutitub, Romano Mwirichia, Genson Muriithi, Joseph Mwiti Marangu (2020), Study on the effect of *Thiobacillus intermedius* bacteria on the physico-mechanical properties of mortars of ordinary portland cement. <https://doi.org/10.1016/j.heliyon.2020.e03232>Received 10 September 2019
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Patent

G. N. Kiriro, **I. W. Mwangi, R. Wanjau.** P. Mbugua (2020) Patent on Hydrogels from domestic animal wastes, Patent Number is KE/P/2019/3389.