


Academic Staff Profile

<p>Name: Prof. Ruth Wanjau Title/Qualification: PhD Department: Chemistry Department Designation/Position: Associate Professor Email: wanjau.ruth@ku.ac.ke Contact Address: 43844-00100 Nairobi Area of Specialization: -Analytical/ environmental chemistry Research Interests: Analytical and Environmental issues Google Scholar: ORCID ID:</p>	
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Academic & Professional Qualifications

- i. Ph.D. (Chemistry) Wuhan University, China (2002) Topic: “Development of Methods for analysis of inorganic trace impurities in high purity Rare Earth Oxides”
- ii. Master of Science (Chemistry) Kenyatta University (1993) Topic: “Determination of Aluminium in Kenyan Tea”
- iii. B. Ed (Sc) (1st Class Honors) (Maths, Chemistry) Kenyatta University (1986)
- iv. Certificate in Chinese Proficiency, Kenyatta University (2011)
- v. East Africa Advanced Certificate of Education, Ngandu Girls’ (1981)
- vi. East Africa Certificate of Education, Kamahuha Girls’ (1979)
- vii. Certificate of Primary Education, Kiawairia Primary (1975)

Employment History

- a) **At Kenyatta University Department of Chemistry**
 1. Associate Professor November 2015 to date
 2. Senior Lecturer: September 2007 to November 2015
 3. Lecturer: January 1996 to September 2007
 4. Tutorial Fellow: July 1992 to December 1995.
 5. Graduate Assistant: 1990-1991
- b) **At Secondary Schools**
 1. Kairi Sec School-July 1986-August 1988
 2. Ruaraka Sec School-September 1988-October 1988
 3. Oolua Sec School-Dec 1991-August 1992

Achievements

1. Vice Chancellor’s award for Best Published Director – 2014
2. Awarding a certificate by International Journal of Scientific Engineering and Technology (ISSN: 2277-1581) in recognition of the publication of the paper entitled “Magnetic Concentration of Iron in Lateritic Soils from Kamahuha, Murang’a County, in Kenya using Carbon Monoxide Generated *In-Situ* Published in IJSET Journal, Volume 3, Issue-8, 1 August 2014”

3. Awarded the GOURMAND WORLD COOKBOOKS AWARDS 2014 Winners May 21, Essential Elements in Watermelons Grown in Kenya: In the category: Best Watermelon Professional Cookbook **Gourmand World Cookbook Awards**
4. DRUSSA Platform 2013
5. Commendation by Office of the Prime Minister, Ministry of State for Public Service for participating in the development of KU HIV and AIDS policy for the Ministry from 8th-14th July , and 29th July to 4th August, 2012.
6. Appreciated by KU VC for a job well done as a warden for Western Women Hostels from 2008-2010.
7. Appreciated by KU VC for serving as a Director, Aids Control Unit from October 2010 to October, 2014.
8. Appreciated by KU VC for serving as a Director, Accommodation Services from October 2014 to October, 2017.

Patents

1. Fabrication of Polyethylene Containers for Removal of Bacteria from Water **Patent Number KE/P/2021/3803**
2. Chamber for Prolonging Fresh Beef Shelf Life with Charcoal Flue Gases **Patent Number KE/P/2021/3802**
3. Patent on Hydrogels from domestic animal wastes, **Patent Number is KE/P/2019/3389.**
4. Developed and patented a Utility Model entitled *Concentration of Laterites Using Biomass* No. KE/U/ 2013/ 000367 (22) 12/06/2013 that was granted patent on June, 2015 and published in the *Industrial Property Journal (Journal of Patents, Industrial Designs, Utility Models and Trade Marks)* of 30th June, 2015.

Publications

Books and Books Chapters

1. Kevin Otieno Okoth (Tom Mboya University College, Kenya), **Ruth Nduta Wanjau** (Kenyatta University, Kenya) and Maurice Otieno Odago (State University of New York at Oneonta, USA) Semiconductor Nanocomposites-Based Photoelectrochemical Aptamer Sensors for Pharmaceuticals Detection Published as a book chapter of the of the [Effects of Emerging Chemical Contaminants on Water Resources and Environmental Health](#) by IGI Global, Copyright: © 2020 |Pages: 24 DOI: 10.4018/978-1-7998-1871-7.ch00, Book Chapter 7(pp. 109-132).
2. John Okapes Joseph, Isaac W. Mwangi, Sauda Swaleh, **Ruth N. Wanjau**, Manohar Ram and Jane Catherine Ngila (2017) A Comparative Study of Modified and Unmodified Algae (*Pediastrum boryanum*) for Removal of Lead, Cadmium and Copper in Contaminated Water: Published as a book chapter of the [Environmental Sciences "Water Quality"](#) By INTECH: DOI: 10.5772/65745. Book chapter 11
3. Nthiga, E.W. **Wanjau, R.** and Murungi, I.J. (2013). Essential elements in watermelons grown in Kenya. LAP LAMBERT Academic Publishing (January 1, 2013). ISBN-13:978-3-8443-3040-3/ ISBN-10:3844330402/EAN: 9783844330403
4. James Ndiritu, Jane Murungi and **Ruth Wanjau** (2012) Essential Elements And Lead In Males Using Finger Nails And Scalp Hair: Influence Of Risk Factors On

Levels Of Lead And Essential Elements In Finger Nails And Scalp Hair Of Males In Kenya □ LAP LAMBERT Academic Publishing (Dec23. 2012).□ ISBN-10: 3659312037/ ISBN-13: 978-3659312038

5. Odongo Adongo, Jane Murungi and Ruth Wanjau (2013). Medicinal Plants and Essential Elements in Them. LAP LAMBERT Academic Publishing (May 24, 2013) ISBN-10: 3659365025 / ISBN-13: 978-3659365027

Refereed Journals

1. Mwangi, I. W., Kinyua, E. M., Nthumbi, R., **Wanjau, R. N.**, Swaleh, S., & Ngila, J. C. (2021). Iron (III) doped titanium dioxide coated dimensionally stable graphite anode electrode for electro-chemical treatment of domestic wastewater. *Heliyon*, 7(4), e06671.
2. Ndung'u S.N., **Wanjau R.N**, Nthiga E.W., Nderitu J., Mbugua G.W. (2020) Complexation equilibrium studies of Cu^{2+} , Cd^{2+} and Pb^{2+} ions onto ethylenedamine quaternised *Artocarpus heterophyllus* L. seeds from aqueous solution. *Journal of Applied Chemistry* Vol. 13, (12): 1-12 e-ISSN: 2278-5736.
3. Njeru, C. W., Mwangi, I. W., **Wanjau, R. N.**, Kiriro, G. N., & Mbugua, G. W. (2020). Determination of Colour and Total Viable Counts in Fresh and Charcoal Flue Gases Treated Beef Using Digital Colour Meter. *International Journal of Scientific Research in Science, Engineering and Technology* Print ISSN: 2395-1990 | Online ISSN : 2394-4099 (www.ijrsrset.com) doi : <https://doi.org/10.32628/IJSRSET207470> 2
4. Masimba Tapera, **Ruth Wanjau**, Alex K. Machocho and Pamhidzai Dzomba (2020). Use of Polyphenol Extracts from *Dioscorea steriscus* and *Plecranthus esculentus* N.E.Br Tubers to Curb Oxidative Deterioration of Sunflower Oil. *South Asian Research Journal of Natural Products* 3(1): 18-28, 2020; Article no.SARJNP.55089
5. 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.
6. Gerald Mbugua, Isaac Mwangi , **Ruth Wanjau** , Moses Abednego Ollengo , Esther Wanja Nthiga , Jane Catherine Ngila (2020). Facile removal of Fluoride Ions from water using Triethylamine Modified Polyethylene Adsorbent *Asian J. Research Chem.*2020; 13(1):60-64.
7. Gerald Mbugua, Isaac Mwangi , **Ruth Wanjau** , Moses Abednego Ollengo , Esther Wanja Nthiga , Jane Catherine Ngila (2020). Facile removal of Fluoride Ions from water using Triethylamine Modified Polyethylene Adsorbent *Asian J. Research Chem.*2020; 13(1):60-64.
8. 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 Sceintific Research in Science, Engineering and Technology (IJSRSET)* 6(4): 151-163.
9. 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.
10. Isaac Mwangi, Grace Kiriro, Sauda Swaleh, **Ruth Wanjau**, Paul Mbugua & Jane Catherine Ngila (2019). Remediation of degraded soils with hydrogels from domestic animal wastes, *International Journal of Recycling of Organic Waste in Agriculture*, published online: 17 January 2019.
 11. Mathew K. Arap Tonui, Isaac Mwangi, **Ruth Wanjau** (2019). Recovery of Zn²⁺, Fe²⁺, and Mn²⁺ from Edible Vegetables and Pumpkin using Modified Maize Cobs, *American Scientific Research Journal for Engineering, Technology, and sciences (ASRJETS)* 51(1): 86-102.
 12. 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.
 13. Isaac Mwangi, Gerald Mbugua, **Ruth Wanjau**, Titus Msagati & Jane Catherine Ngila (2019). Removal of Fluoride Ions in Stored Drinking Water by Triethylamine Chemically Modified Polyethylene Containers, *International Journal of Environmental Research (Int. J Environ Res)* 13(1): 175-184.
 14. Isaac Mwangi, Grace Kiriro, Sauda Swaleh, **Ruth Wanjau**, Paul Mbugua & Jane Catherine Ngila (2019). Remediation of degraded soils with hydrogels from domestic animal wastes, *International Journal of Recycling of Organic Waste in Agriculture*, published online: 17 January 2019.
 15. Mathew K. Arap Tonui, Isaac Mwangi, **Ruth Wanjau** (2019). Recovery of Zn²⁺, Fe²⁺, and Mn²⁺ from Edible Vegetables and Pumpkin using Modified Maize Cobs, *American Scientific Research Journal for Engineering, Technology, and sciences (ASRJETS)* 51(1): 86-102.
 16. OD Nyaitondi, **RN Wanjau**, H Nyambaka, A Hassanali (2018) Anti-bacterial properties and GC-MS analysis of extracts and essential oils of selected plant product. *Biofarmasi Journal of Natural Product Biochemistry* 16 (1), 44-58.
 17. Scholastica Gatwiri Mathenge, **R.N. Wanjau**, G.M.Kenji (2017) Trimethoprim and sulfamethoxazole residues in untreated wastewater used for irrigation in peri-urban farms in Nairobi County, Kenya. *Nature Environment and Pollution Technology* 4 (16) ISSN 0972-6268 (Print) ISSN 2395-3454 (Online)
 18. Mbugua G, Mwangi IW, Swaleh S, **Wanjau RN**, Ram M and Ngila JC (2017)- Remediation of Fluoride Laden Water by Complexation with Triethylamine Modified Waste Polythene Material, *Material. Mater Sci Ind J.* 15(01):113
 19. Nthiga Esther Wanja, Prof. Jane Murungi, Prof Ahmed Hassan Ali, **Prof Ruth Wanjau** (2016). Efficacy of Adsorption of Cu (II), Pb (II) and Cd (II) Ions onto Acid Activated Watermelon Peels Biomass from Water. *International Journal of Science and Research (IJSR)* 5(8): 671-679. ISSN: 2319-7064
 20. Nthiga, E.W; Murungi, IJ; **Wanjau, R.** and Ahmed, A. (2016). Application of chemically modified seed for removal of copper (II), lead (II) and cadmium (II) ions from aqueous solutions. *International Journal of Research in Engineering and Applied Sciences*, 6(8):1-15. ISSN: 2349-6525
 21. Charles Kamathi Mwangi, Isaac W. Mwangi, **Ruth N. Wanjau**, Sauda Swaleh, Manohar Ram & J.C. Ngila (2016). Remediation of Fluoride Laden Water by Complexation with Triethylamine Modified Maize Tassels. *Environment and Natural Resources Research*; Vol. 6, No. 1; ISSN 1927-0488 E-ISSN 1927-049 January

22. Kiriro G. Nduta & Isaac W. Mwangi & **Ruth N. Wanjau** & J. C. Ngila (2016). Removal of Chlorine and Chlorinated Organic Compounds from Aqueous Media Using Substrate-Anchored Zero-Valent Bimetals, *Water Air Soil Pollut* 227:10, January
23. Esther Mbuci Kinyua & Isaac W. Mwangi & **Ruth N. Wanjau** & J. C. Ngila (2015). Clarification of colloidal and suspended material in water using triethanolamine modified maize tassels. *Environ Sci Pollut Res*, November
24. Muchemi G. N., **Wanjau R. N.**, Murungi I. J., and Njue W. M. (2015). Assessment of essential trace elements in selected food grains, herbal spices and seeds commonly used in Kenya *African Journal of Food Science.*, 9(8), 441-447, August
25. Odhiambo, V. O., **Wanjau, R.**, Odundo, J. O. and Nawiri, M. P. (2015). Toxic trace elements in different brands of milk infant formulae in Nairobi market, Kenya *African Journal of Food Science* ., 9(8), 437-440, August
26. Njoroge, P.W., Mutembei P.K., Wachira, J. M. and Wanjau, R. (2014). Magnetic Concentration of Iron in Lateritic Soils from Kamahuha, Murang'a County, in Kenya using Carbon Monoxide Generated In-Situ *International Journal of Scientific Engineering and Technology* 3 (8): 1043-1046
27. Mathenge Scholastica Gatwiri1, **Wanjau Ruth Nduta**, Kenji Glaston Mwangi (2014). Sulfamethoxazole Residues in Vegetables Irrigated with Untreated Wastewater., *J. Pharm. Biomed. Sci.*, 4(1)1-10.
28. Ngari FW, **Wanjau RN**, Njagi EN, Gikonyo NK (2014). Herbal Materials Used in Management of Oral Conditions in Nairobi, Kenya. *Journal of Oral Health &Community Dentistry* 8(1): 36-42
29. TM Kipngetch, **RN Wanjau**, NK Gikonyo, J Murungi, CK Nicholas (2014). Influence of Soil and Rain on the Levels of Inorganic Anions in Amaranth Leaves from Selected Parts of Kenya. *Food Science and Quality Management* 31, 12-20
30. Joyce G.N. Kithure, **Ruth N Wanjau**, Jane I Murungi., Caroline L. Thoruwa (2014). Analysis of Deltamethrin Residue Amounts Using HPLC in Some Vegetables Consumed in a Rural Area - Makuyu, Kenya *The International Journal of Science & Technoledge* (ISSN 2321 – 919X) 2(12):279-284.
31. Onyambu Z.M., Nawiri, M.P., Kareru, P and **Wanjau, R.N** (2014). Levels of Selected Heavy Metals in Aloe vera Branded herbal Soaps sold in the Kenya Market. *Kenya Chemical Society* Volume 8: Issue 1, 98-102.
32. Esther W. Nthiga, **Ruth Wanjau**, Jane I. Murungi (2014). Levels of chromium in peel, seeds, red flesh and white flesh of Varieties of Watermelons grown in Kenya. *Kenya Chemical Society* 8(1): 73-82
33. Njiru, M.K, Odundo, J.O, **Wanjau, R.N** and Nawiri, M.P (2014) Exploring the Nutraceutical Values of Residues of *Mangifera Indica L.* Grown In Embu County, Kenya *Journal of Kenya Chemical Society* 8: (1): 83-88
34. Joseph K. Rugutt,, Kevin Otieno Okoth, **Ruth N. Wanjau**, Nicholas K. Gikonyo, Alex Machocho, Kipgeno J. Rugutt, Kristina Y. Rykhlya, Keil B. Harris, Katie R. Wilson, and Joel Koech (2014). US-Africa Collaboration in a Chemical Education Project Involving Analysis of Amaranthus Grain Oil from Selected Agro-Ecological Zones in Kenya. *Chem. Educator* 19: 50–54.
35. Joseph K. Rugutt,, Kevin Otieno Okoth, **Ruth N. Wanjau**, Nicholas K. Gikonyo, Alex Machocho, Kipgeno J. Rugutt, Kristina Y. Rykhlya, Keil B. Harris, Katie R. Wilson, and Joel Koech (2014). A Quantitative Analytical Chemistry Research-based

- Experiment Involving Comparative Analysis of Amaranth Grain Oils Extracted from Embu and Meru Districts in Kenya *Chem. Educator* 19: 91-95.
36. PM Njogu, JJ Kitetu, **RN Wanjau**, JM Keriko (2013) Application of the Perpest Model in the Prediction of Environmental Risks of Endosulfan on *Oreochromis Leocostictus*. A Case Study of Lake Naivasha, Kenya. Scientific Conference Proceedings
 37. EO Omwango, ENM Njagi, GO Orinda, **RN Wanjau** (2013). Nutrient enrichment of pineapple waste using *Aspergillus niger* and *Trichoderma viride* by solid state fermentation *African Journal of Biotechnology* 12 (43): 6193-6196
 38. EW Nthiga, **R Wanjau**, JI Murungi (2013). Analysis of levels of boron in three varieties of watermelons from githurai and mwea markets in Kenya. *International Journal of Physical and Social Sciences* 3 (1): 263-278
 39. Masime Jeremiah O, **Wanjau Ruth**, Murungi Jane and Onindo Charles (2013). Analysis of the levels of arsenic in home-made brews, spirits, in water and raw materials using Hgaas in Nairobi county. *African Journal of Pure Applied Chemistry* 7 (8): 291-301
 40. Florence W. Ngari, Nicholas K. Gikonyo, **Ruth N. Wanjau** and Eliud N.M. Njagi (2013). Investigation of Selected Pathogenic Microorganisms and Toxic Elements in Herbal Materials Used in Management of Oral Health in Nairobi County, Kenya *J. Appl. Environ. Biol. Sci.*, 3(12)1-7.
 41. Jeremiah O. Masime, **Ruth Wanjau**, Charles Onindo (2013). Determination Of the Levels of Nitrite in Homemade Brews, Spirits and Raw Materials Used Using UV – Visible Spectroscopy In Nairobi County *International Journal of Advancements in Research & Technology*, 2(7): 461-472.
 42. Masime Jeremiah, **Wanjau Ruth**, Murungi Jane, Onindo Charles (2013). Analysis of the Levels of Nitrate in Homemade Brews, Spirits, in Water and Raw Materials in Nairobi County. *Applied Scientific Research* 2013; 2(6):14 – 19
 43. Masime Jeremiah O, **Wanjau Ruth**, Murungi Jane, Onindo Charles (2013). A Comparison of the Levels of Nitrate, Nitrite and Phosphate in Homemade brews, Spirits, in Water and Raw Materials in Nairobi County Using UV-Visible spectroscopy *International Journal of Scientific & Engineering Research*, 4, (12): 329-344.
 44. James Ndiritu, **Ruth Wanjau**, Jane Murungi (2013). Lead and Zinc in Finger Nails and Scalp Hair of Adult Males in Kenya. *International Journal for Innovation Education and Research* 1(4): 95-108.
 45. Ndiritu James, Murungi Jane, **Wanjau Ruth** (2013). Lead and calcium in human males using finger nails and scalp hair. *International Journal of Physical and Social Sciences* 3 (1): 393-410.
 46. Stephen Odongo Adongo, Jane Murungi, **Ruth Wanjau** & Fidensio Ndegwa (2012). Determination of The Concentrations of Zinc, Magnesium and Iron in Some Medicinal Plants Used By The Chuka Community In Kenya. *The SciTech, Journal of Science & Technology* 1(2): 1-7.
 47. Njagi E. Silas Jane I. Murungi **R.N. Wanjau** (2012). The pH of Leaf Water Extracts and Amount of Acid required lowering the pH of Leaf Water Extracts to 5.0 *American International Journal of Contemporary Research* 2 (11); 72-78.
 48. Njagi E. Silas Jane I. Murungi **R.N. Wanjau** (2012). Levels of Macronutrients of Leaves of Selected Plants from Highlands East of Mount Kenya *International Journal of Applied Science and Technology* 2(9): 105-110.

49. James Ndiritu, Jane Murungi, **Ruth Wanjau**, Njogu Kagema . Assessment Of Lead Risk Exposure Factors In Adult Males In Kenya. *International Journal of Physical and Social Sciences* Vol 2(12):525-546.
50. James Ndiritu, **Ruth Wanjau**, Jane Murungi (2012). Lead in Finger Nails and Scalp Hair of Adult Males in Kenya *International Journal of Physical and Social Sciences* Vol 2(10): 211-224.
51. S.O. Adongo, J. Murungi, **R. Wanjau** & F. Ndegwa (2012). Analysis of Selected Essential Elements of Medicinal Plants used by Chuka Community, Tharaka Nithi County, Kenya *The Sci. Tech, Journal of science and Technology Special Issue*, p.87-94
52. S. O. Adongo, J. Murungi, **R. Wanjau** (2012). Determination of Levels of Selected Essential Elements in the Medicinal Plants used by Chuka Community, Meru-Kenya using AAS. *International Journal of Physical and Social Sciences* Vol 2(5): 69-82.
53. Joseph B. Skudi, **Ruth Wanjau**, Jane Murungi and C.O.Onindo (2011). Alum Treated Grey Water for Toilet Flushing, Mopping and Laundry Work. *Hydrology Current Research* 2(2): 114-117.
54. P. M. Njogu, J. M. Keriko, **R. N. Wanjau** and J. J. Kitetu (2011). Distribution of Heavy Metals in Various Lake Matrices: water, soil, fish and sediments. A Case Study of the Lake Naivasha Basin, Kenya. *Journal of Agriculture, Science and Technology*, Vol. 13 No. 1, 91 – 106.
55. Njogu P. Mwangi, **Wanjau R. Nduta** and Murungi J. Igoki (2009). The Therapeutic and Nutritional Value of Tea Beverage in Respect to Active Metallo-enzyme, Immune Boosters and Anti-Oxidant Ingredients. *International Journal of Biological Science*, Vol. 1, No. 2, 77 – 81.
56. Faridah Hussein Were, Wilson Njue, Jane Murungi, **Ruth Wanjau** (2009). Comparison Of Some Essential And Heavy Metals In The Toenails And Fingernails Of School-Age Children In Kenya *Bull. Chem. Soc. Ethiop.* 23(1): 117-122.
57. Murungi J. Igoki, Njogu P. Mwangi, **Wanjau R. Nduta**, Potential environmental challenges posed by the disposal of spent tea leaves into the environment, *Int. J. of Pure and Appl. Sci.* 1(3):89-94 (2008).
58. Faridah Hussein Were, Wilson Njue, Jane Murungi, **Ruth Wanjau**. Use of Human nails as bio-indicators of heavy metals environmental exposure among school age children in Kenya *Science of the Total Environment*, 2008, 392: 376-384.
59. Muchemi G.N., **Wanjau R.N.**, Murungi J.I., Njue W, Determination of some immune boosting trace elements in selected food grains grown in Kenya *J. of The Kenya Chemical Society* 2007, 4(1): 27
60. **Ruth Wanjau**, Hu Bin, Jiang Zucheng, He Man, Liang Pei, Determination of Trace Metal Impurities in Cerium Oxide by Fluorination-Assisted ETV-ICP-AES HPLC Separation Using P507 Resin, *J. Rare Earths*, 2004, 22(2): 197.
61. **Ruth Wanjau**, Hu Bin, He Man Jiang Zucheng, Wu Ying-liang, Direct Determination of trace Impurities in High Purity Neodymium after In-Situ Analyte Matrix Separation by Fluorination Assisted ETV-ICP-AES *J. Rare Earths*, 2004, 22(3): 319.

62. **Ruth Wanjau**, Jane Murungi, Gathu Nyaga, The Effects of Cleaning Technique on Aluminium Leaching from Aluminium Cookware, J. of The Kenya Chemical Society J. of The Kenya Chemical Society 2004, 2(1): 4.
63. **Wanjau Ruth**, Jiang Zu-cheng, Hu Bin, Qin Yong-chao, Wu Ying-liang, Zhu Xia-shi, Simultaneous Determination of Trace Rare Earth Elements and Other Elements in High purity Terbium Oxide (Tb₄O₇) by ICP-AES After HPLC Separation Using P507 Resin, Wuhan Journal of Natural Sciences, 2002, 7(2): 221
64. **Ruth Wanjau**, Jiang Zucheng*, Hu Bin, Shuai Qin, Qin Yongchao, wang Lei, Determination of Non-Rare Earth Impurities in High purity Lanthanum Oxide by Inductively Coupled Plasma Atomic Emission Spectrometry after HPLC Separation Using P507 Resin, J. Rare Earths, 2001, 19: 299.
65. Shuai Qin, Hu Bin, Qin Yongchao, **Ruth Wanjau**, Jiang Zucheng, Determination of Trace Rare Earth Impurities in High –purity Cerium Oxide by Using electrothermal Vaporization/ICP-AES after HPLC Separation with 2-ethylhexyl hydrogen 2-ethylhexyl phosphonate resin as Stationary Phase, J. Anal. Atom. Spectrom., 2000, 15: 1413.

Funded Research Projects

1. 2020/2021 KU VC research and innovation grant for a proposal on Inclusive education: An interactive learning resource for visually challenged learners in secondary schools in Kenya.
2. NRF National Research Fund grant – Optimization of Nutrients Release Parameters from a Solid Substrate Anchored Material for Growth of some Selected Plants
3. KU VC research grants (Soil improvement using leaves and leaves extract for the growth of crops project) -2014-3 Postgraduate Students
4. NACOSTI Women's research grant, 2013/2014-3 Postgraduate Students
5. TOWA HIV and AIDS activities in KU-2013-2 Undergraduate Students
6. NCST MSc research grants (three of them)-2012.
7. NCST PhD research grants (Analysis of laterites for Iron)-2011, 1 Postgraduate Student
8. NCST MSc research grants (Analysis of trace elements in indigenous vegetable)-2011
9. NCST MSc research grants (Analysis of pesticide residues)-2009
10. KU VC research grants (NPK fertilizer and animal feed from chicken feathers)-2008-3 Postgraduate Students
11. KU VC research grants (Avacado Value addition in Evurore, Embu)-2008-3 Postgraduate Students.

COLLABORATION FOR RESEARCH

1. KAPP RCIC member, 2008, for Amaranth project (4 Postgraduate Students under me benefited).
2. National Commission For Science, Technology and Innovation Science, Technology And Innovations (ST&I) Grant Women Scientists Programme 2013/2014

Conference/Workshops/Seminar Papers

Conference Papers

1. Removal of Pb(II), Cu(II) And Cd(II) From Aqueous Solution By Chemically Modified Fruit Waste Adsorbents by Dr. Esther W Nthiga, Prof. Jane Murungi, Prof. Ahmed Hassanali & Prof. Ruth Wanjau: Presented at The Kenya National Dam Conference, March 2018, Mombasa Kenya.
2. Njogu PM., Kitetu JJ., Wanjau RN., and Keriko JM. (2012). Application of the PERPEST Model in the Prediction of Environmental Risks of Endosulfan on Oreochromis Leocostictus. A Case Study of Lake Naivasha, Kenya – Paper submitted for presentation as a paper at this year’s JKUAT Annual Scientific conference slated for November
3. Njogu Paul, Keriko Joseph, Wanjau Ruth and Kitetu Jackson (2011) Assessment of Occurrence and Concentrations of Xenobiotics in Selected Fish Species from Lake Naivasha, Kenya, Kabarak University Annual Conference -11th- 14th October 2011
4. Wanjau Ruth and Muringe Rose. NACC second National Biennial HIV and AIDS Scientific Research Conference from 6th-9th 2013 and also presented a paper on Community Based Intervention Strategies in Place at Kenyatta University ACU
5. FANUS conference, May 2007 QUARZAZATE, MOROCCO)
 - a. Jane I. Murungi, Ruth N. Wanjau, Grace.N Muchemi., Wilson Njue, Hamisi M. Malembo. Pumpkin seeds as reservoirs of essential trace elements needed for the health and well-being of women and children
 - b. Judith Munga, Hudson Nyambaka, Judith Waudu, Ruth N. Wanjau, Determination of glycemic index for nutritional management of diabetes
6. Ruth N. Wanjau , Crispus Muriuki., John K. Mbugua. HIV and AIDS and reproductive Health conference, April 2007 (KIE) RAAG participatory education and training for community development.
7. The 5th Kenya Chemical Society Conference at Kenyatta University (August, 2005). Muchemi Grace, Ruth Wanjau, Jane Murungi, Wilson Njue, Levels of Zn, Cr, V and Se in food grains
8. Harambee Youth Week/International Youth day (August 2005). Ruth Wanjau, Youth Motivation and best practices as alternative to sustainable livelihoods
9. The 9th Chinese Conference of analytical Chemistry of Rare Earth Elements Research. (Sept. 2001), Wuhan, Wanjau Ruth, Zucheng Jiang, Bin Hu, Yongchao Qin, Pei Liang, Separation and Determination of Some Trace Metal Impurities in High purity Cerium Oxide by HPLC with Fluorination-assisted ETV-ICP-AES.

10. Hubei Province 6th Chemistry and Chemical Engineering Association of Analytical Chemistry Scientific Report (May 2001). Wuhan. Ruth Wanjau, Jiang Zucheng, Hu Bin, Qin Yongchao, Liang Pei, Determination of trace non-rare earth impurities in high purity cerium oxide by ICP-AES after HPLC separation using p507 resin
11. Kenya Chemical Society Inaugural Conference (June 1993), Nairobi, R. Wanjau, G. Nyagah, Determination of Levels of Aluminium in Kenyan Tea by AAS, Kenya Chemical Society Inaugural Conference Proceedings, p. 156. (June 1993) Kenyatta University postgraduate seminars (1993)

Conferenced/Workshops/Seminars Attended/Presented

- 1) INTERNATIONAL TRAINING ON TRANSFORMATIONAL LEADERSHIP FOR ACTIL MENTORS & MENTEES, 25th - 29th JANUARY 2021 attended as a mentor
- 2) **Third Annual International Working Group of Organizations Caring for Families of Military Deceased** on December 7-11, 2020 at the TAPS National Headquarters in Arlington, Virginia outside Washington, DC.
- 3) Speaker for Tangaza University students webinar on Developing coping skills in times of adversity November, 2020
- 4) Global Peace Leadership Conference (GPLC) 2020 African Virtual. 30th and 31st July, 2020
- 5) Consortium for Advanced Research Training in Africa (CARTA step-down webinar) "Navigating the Research Landscape: 24th June, 2020
- 6) Peer Counsellors training 22nd February to 2nd March, 2020 held at KU, BSSC. Presented on Entrepreneurship, Stress Management
- 7) World Entrepreneurs Investment Forum 11th to 14th November, 2019 at Manama, Bahrain
- 8) 1st International Food Safety Conference 20th to 24th May, 2019 held at Kenyatta University Nairobi, Kenya
- 9) STEM Camp, 22nd to 27th April, 2019 Kericho Moi Tea Girls' Secondary School. Presented a career talk on Applied Sciences – Chemistry.
- 10) **2nd International Leadership Conference for Women in Higher Education (AAU WoHE 2019)** under the theme "*Promoting Women in Science to Address the 21st Century Challenges*" held 6th - 8th March 2019 Nairobi, Kenya
- 11) Peer Counsellors training 24th March to 2nd April, 2018 held at KU, BSSC. Presented on Challenges facing Kenyan Youth, Examination Irregularities and Class Attendance
- 12) PCEA Ruiru Youth Forum 12th April, 2018 Presented talk on Career guidance and counselling, and University Life
- 13) International Conference on Materials, Science and Research (ICMSR) November 16th to 18th, 2017 Dubai, UAE. Presented a paper.

Convening and Coordinating Conferences/Workshops/Seminars/Training

- 1) A member of the committee organizing the enhanced Security trainings for KU community-2015
- 2) Coordinated the HIV seminars from 2010-2014
- 3) Coordinated Training of Trainers' Workshop on HIV Curriculum Integration for AAU/TOWA at Kenyatta University Conference Centre (KUCC) from 21ST& 24th MAY 2013

- 4) Coordinated Training of Trainers' Workshop on Peer Education for TOWA/KU at Kenyatta University Conference Centre (KUCC) from 13TH- 17TH MAY 2013
- 5) Organized a TOT for HIV integration and mainstreaming in May 2013
- 6) Coordinated Training of Trainers' Workshop on HIV Curriculum Integration for AAU at Kenyatta University Conference Centre (KUCC) from September 25th -26th 2012
- 7) Coordinated Training for housekeepers on how to pass key messages to students and reduction of stigma at Kenyatta University Conference Centre (KUCC) from 29th April-3rd May 2013
- 8) Coordinated Training of Trainers' Workshop on HIV Curriculum Integration for AAU at Kenyatta University Conference Centre (KUCC) from September 25th -26th 2012
- 9) Coordinated A Research Methodology Workshop for at Kenyatta University Conference Centre (KUCC) from 28TH -31ST MAY, 2012 for AAU_EASRN.
- 10) A member of the committee organizing for the African family strength international conference (2008-2010)
- 11) A member of the committee that organized for the SPAS HIV and AIDS Mainstreaming Workshop (April, 2007)
- 12) Chairperson of one of the session of the SPAS HIV and AIDS Mainstreaming Workshop (April, 2007)
- 13) An organizer for the SPAS graduads seminar (March, 2007)
- 14) A local organizer for the 5th international Kenya Chemical Society Conference (2005)
- 15) Chairperson of the last session of the 5th international Kenya Chemical Society Conference (2005)

Supervision of Postgraduate Students

Masters

Have supervised thirty seven (37) and currently supervising Nineteen (19) Masters Students of Kenyatta University

Ph. D

Currently supervising three (3) doctorate students from KU, seven (7) have graduated from KU and one (1) from JKUAT has graduated.-

Professional/ Consultancy (Editor/ Peer review in journals, Networks/ Collaborations, External Examiner, Patents)

- 1) External Examiner Turkana University College from 2021
- 2) External examiner JKUAT from 2019 to date
- 3) Curriculum review Workshop for Kabianga University on 24th -25th June, 2014 at Tea Research Foundation – Kericho.
- 4) A proposal reviewer for JKUAT
- 5) Journal paper reviewer for KCS
- 6) Have been involved in Refereeing papers for KCS journal and for JKUAT
- 7) Have been examining both Masters and PH D Theses of KU
- 8) Have been examining theses for JKUAT
- 9) Have been reviewing research proposals for JKUAT

10) Have been reviewing postgraduate theses for University of Eldoret

Community Service and Other Engagements

1. BOM member- Soft-choice Integrated Social Enterprise Program (SISEP) 2020
 2. BOM member- Gathiru-ini Secondary-2019 to date
 3. BOM member-Kiu River Secondary-2019 to date
 4. BOM member-Kibirigwi Secondary-2012 to date
 5. Member of Nyeri Professionals 2018 to date
 6. Chairperson, Kenyatta University Nyeri Staff Welfare Association (KUNSWA) Investment Limited from 2015-to date
 7. Chairperson, Kiambu County Education Board-2014 to date
 8. Member of Komothai Professionals and Business People Association 2014 to date
 9. A member of Lifeline Development Initiative Advisory Board-2014 to date
 10. Chairperson, Walls of Hope International NGO-May 2013 to date
 11. Chairperson, Kenyatta University Nyeri Staff Association (KUNSA) from 2013-to date
 12. BOM member-Familia ya Ufariji Childrens home -2013 to date
 13. BOM member Thika Technical Training Institute-2010 to March 2013
 14. BOM member-Juja Secondary-2010- 2013
 15. BOM member-Komothai Girls Tech school -2009 to2013
 16. BOM member-Kambui Girls -2011 to 2013
 17. Secretary-KU community bible study committee member -2012 to date
 18. DEB member-Githunguri District-2009 to 2014
 19. PTA Chairperson, Kibirigwi Girls Sec Sch -2011-to date
 20. Chairperson-Kahawa Wendani Bible Baptist Church Women group, 2007-2010
 21. Co-ordinator - Kahawa Wendani Bible Baptist Church Women group, 2010-2012.
 22. Youth Patron- Kahawa Wendani Bible Baptist Church Youth group, 2008 to present
 23. Secretary- St. Faith Upper Matasia ACK Church; 2002-2003
 24. Form 1 PTA representative (2004)- Kaheti High School
 25. Bible League associate member
 26. Ruiru Aids Awareness Group (RAAG) member
 27. Giving academic/social/spiritual talks to schools, colleges, churches, counties etc during education days and others.
 28. Chief guest for high school and Education days in the country
- International Community
1. Leader: Wuhan City Christian Fellowship, China (2000-2002)
 2. An associate member of PACE International (NGO)
 3. An associate member of Rescue Hope International (NGO)

Affiliation of Professional Bodies

1. A Life Member of the Kenya Chemical Society –Membership No. LM 009-1993.
2. A Life Member of the Kenya Association of Food Security and Protection (KAFSAP)
3. A member of the Royal Chemical Society-Membership No. 461748 – 2015
4. A Member *Kenya Association of Gerontology and Geriatrics* a member of the International Association of Gerontology and Geriatrics

National and International awards and Recognitions

- 1) Vice Chancellor’s award for Best Published Director – 2014

- 2) Awarding a certificate by International Journal of Scientific Engineering and Technology (ISSN: 2277-1581) in the recognition of the publication of the paper entitled
- 3) a.Magnetic Concentration of Iron in Lateritic Soils from Kamahuha, Murang'a County, in Kenya using Carbon Monoxide Generated In-Situ Published in IJSET Journal, Volume 3, Issue-8, 1 August 2014
- 4) Awarded the GOURMAND WORLD COOKBOOKS AWARDS 2014 Winners May 21, Essential Elements in Watermelons Grown in Kenya: In the category: Best Watermelon Professional Cookbook Gourmand World Cookbook Awards
- 5) DRUSSA Platform 2013
- 6) Commendation by Office of the Prime Minister, Ministry of State for Public Service for participating in the development of KU HIV and AIDS policy for the Ministry from 8th-14th July , and 29th July to 4th August, 2012.
- 7) Appreciated by KU VC for a job well done as a warden for Western Women Hostels from 2008-2010.
- 8) Appreciated by KU VC for serving as a Director, Aids Control Unit from October 2010 to October, 2014.
- 9) Appreciated by KU VC for serving as a Director, Accommodation Services from October 2014 to October, 2017.

Administrative Positions Held

Recognized university administrative positions

1. A Co-Chair to KUSA Electoral Commission 2016
2. A member of the Committee to prepare for the IAAF Inspection Mission from 7th January 2016
3. A member of the KUCU board from 2016
4. A member of Students with Special Needs Vetting Committee from 4th September 2015 to date
5. A Co-Chair to KUSA Electoral Commission 2015.
6. A member of KU Accommodation Services Board from 18th August 2015 to date
7. In Charge of Accommodation and Housekeeping for YALI trainings from 15th July 2015
8. A member of PPP Hostels Project Implementation Committee from 19th June 2015.to October 2017
9. A member of KU Disability Services from 19th May 2015 to October 2017.
10. Director, Accommodation Services –October 2014 to October 2017.
11. Director, Aids Control Unit-October 2011- October 2014
12. A member of Accommodation Services Disciplinary Committee from 2014 to October 2017.
13. Appointed to represent the University at NASCOP 2013 to 2014.
14. Member of a committee planning the *Pan African International Family Strength Conference* held in Mombasa Kenya and hosted by Kenyatta University 2010.
15. A member of KU TP board from 2010 to 2014
16. A member of KU IBP board from 2010 to 2017.
17. A warden for western ladies hostels from 2008 to 2010.
18. A member of the ACU board from 2010 to date
19. A Co-ordinator of East Africa Sub-region network of the AAU HIV Project from 2010 to 2014

