

## Curriculum Vitae

<b>Personal information</b>	
Name	Wilfrida Nyanduko Nyairo
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Telephone (s)	Mobile: +254 722 692728/ +254 722 843180/+254 715 815030
E-mail	<a href="mailto:nynyairo@gmail.com">nynyairo@gmail.com</a> ; wnyairo@maseno.ac.ke
Date of birth	23 <sup>rd</sup> December 1976
Marital status	Married
<b>Education and Training</b>	
Dates	June 2014 to Dec 2018
Title of qualification	Doctor of Philosophy (PhD) in Chemistry Environmental/inorganic Chemistry
Principle subject(s)	Optimization of graphene oxide with methyl beta cyclodextrin and oxidized carbon nanotubes with polypyrrole for removal of lead(II) and copper(II) ions from water.
<b>Research topic</b>	<b>Maseno University</b>
Institution	1 <sup>st</sup> October 2015 to 10 <sup>th</sup> March 2016 Research stay and training- PhD student
Dates	Chemistry laboratory- Necmettin Erkaban (Konya-Turkey)
Purpose	Analytical Techniques (Scanning Electron microscopy, X-Ray
Institution	Diffraction, Raman Spectroscopy, FT-IR, BET analysis) and material
Skills attained	synthesis
Dates	Aug 2011-Dec 2013
Title of qualification	MSc in Chemistry
<b>Research topic</b>	Effect of Anthropogenic activities on the nutrient load and heavy metals in water and sediments along Nyangores and Amala tributaries of River Mara -Kenya.
Skills attained	Analytical techniques (AAS and UV-Vis spectroscopy)
Institution	<b>Maseno University</b>
Dates	July 1995-april 2000
Title of qualification	B ed (Science – Chemistry and Maths) – Second Class upper division
Institution	<b>Egerton University</b>
Dates	1990-1993
Title of qualification	Kenya certificate of secondary education (B+)
<b>Personal skills</b>	Self driven, team player and works well with minimum supervision.
<b>Technical skills</b>	Chemical analysis of water quality parameters, analysis of heavy metals

<p><b>Organization skills</b></p>	<p>and nutrient load in water and sediments and removal of heavy metals from water. Leadership skills: Participated in the organising of the 8<sup>th</sup> Kenya Chemical Society Conference in Maseno University, 2012</p>
<p><b>Work experience</b></p> <p>Date Position held Name of employer</p> <p>Date Position held Name of employer</p> <p>Date Position Courses trained, examined and marked</p> <p>Date Position held Name of employer</p>	<p>March 2021 to date Lecturer Maseno University</p> <p>January 2020 to February 2021 Tutorial Fellow in Chemistry- Kaimosi Friends University College</p> <p>Aug 2014-Dec 2019 Part-Time lecturer – Department of Chemistry Maseno university Rongo University Kisii University ( Kisumu Campus) Kaimosi Friends University College</p> <p>Basic analytical chemistry, Basic inorganic chemistry, Basic Physical chemistry, Physical chemistry I, Instrumentation in chemical analysis, Chemical Thermodynamics and Phase Equilibria, Basic kinetics and thermodynamics, Stereochemistry and conformational analysis, Heterocyclic and Stereochemistry, Comparative studies of d and f block elements, Comparative studies of s and p block elements, Basic organic chemistry.</p> <p>Sep 2001-to date Teacher: Teaching, evaluation and assessment – Secondary Chemistry and Maths Administrative roles: Head of department of maths and sciences, class teacher and career development teacher Teachers Service Commission, Kenya</p>
<p><b>Personal skills</b> <b>Technical skills</b> <b>Organization skills</b></p>	<p>Self driven, team player and works well with minimum supervision. Chemical analysis of water quality parameters, analysis of heavy metals in sediments. Leadership skills: Participated in the organizing of the 8<sup>th</sup> Kenya Chemical Society Conference in Maseno University, 2012</p>
<p><b>Awards and Funding</b></p>	<p>Exceed-SWINDON <b>PhD scholarship 2015-2016</b> Research stay in Turkey  National Council of Science, Technology and Innovation (<b>NACOSTI</b>) Kenya grant 2015/2016. PhD grant for research: Title “<i>Derivatization of</i></p>

	<p><i>oxidized carbon nanotubes with polypyrrole and graphene oxide grafted with methyl beta -cyclodextrin for removal of heavy metals from water”.</i></p> <p>Lake Victoria Basin commission (LVBC)-SIDA funding 2010-2011 in Maseno University for masters of science research: Title “<i>Effect of Anthropogenic activities on the nutrient load and heavy metals in water and sediments along Nyangores and Amala tributaries of River Mara – Kenya</i>”.</p>
<p><b>Conference</b></p>	<p>CREATE-3 International conference on “<b>Understanding Ecosystem Degradation, Restoration Ecology and Water Management in the Lake Basin Region of Kenya</b>”. Held on 3<sup>rd</sup>-6<sup>th</sup> February 2015, Kisumu – Kenya.</p> <p>Nyairo, W.N., Owuor, P.O., Kengara, F.O. (2015). Nutrient load and Heavy Metals in the water along Rivers Amala and Nyangores Tributaries of Mara River for Assessment of recent increase in Anthropogenic Activities</p> <p>Conference on <b>Water Perspectives in Emerging Countries: Modern and Traditional Methods of Water Resource Management in Africa</b>. May 5-9, 2019 – Durban, South Africa</p> <p>E.O. Agunja, D. Onger, B.C. Nyamosi, W. Nyairo, C. Kowenje. (2019) Evaluating combinatorial water treatment by locally available materials</p>
<p><b>Scientific Publication(s)</b> <b>Journal articles</b></p> <p><b>Book chapters</b></p>	<ol style="list-style-type: none"> <li>1. Nyairo W.N., Yasin E.R., Kowenje C.O., Iker A., Haluk B., Ali T., Onger D. (2018). Efficient adsorption of lead (II) and copper (II) from aqueous phase using oxidized multiwalled carbon nanotubes/polypyrrole composite. <i>Separation science and technology</i>. DOI:10.1080/01496395.2018.1424203</li> <li>2. Nyairo W. N., Yasin, R. E., Kowenje C., Zor, E., Bingol, H., Tor, A., Onger, D.M. (2017). Efficient removal of lead (II) ions from aqueous solutions using methyl-β-cyclodextrin modified graphene oxide. <i>Water, Air and Soil pollution</i> 228(406)</li> <li>3. Nyairo W.N., Owour P.O., Kengara F.O. (2015). Effect of Anthropogenic activities on the water quality of Nyangores and Amala tributaries of River Mara –Kenya. <i>Environmental Monitoring Assessment</i> 187(691)</li> </ol> <p>I. <b>Nyairo W.N.</b>, Ngeno, E., Shikuku, V., Ssebugene, P. (2021). Application of Metal-Organic Framework Adsorbents for Water Defluoridation in (book). <i>Emerging Applications and Implementations of Metal-Organic Frameworks</i>, pp74-91, IGI global. Doi : 10.4018/978-1-7998-4760-1.ch005</p>

	<p>II. Shikuku, V., <b>Nyairo W.N.</b> (2020). Preparation and Application of Polymer-Metal Oxide Nanocomposites in Wastewater Treatment: Challenges and Potentials in (book). Diverse Applications of Organic-Inorganic Nanocomposites, pp 83-102., IGI global. Doi : 10.4018/978-1-7998-1530-3.ch004</p> <p>III. Shikuku, V., <b>Nyairo W.N.</b> (2019). Advanced Oxidation Processes for Dye Removal from Wastewater in (book) Impact of Textile Dyes on Public Health and the Environment, pp 205-238, IGI global. Doi : 10.4018/978-1-7998-0311-9.ch010</p> <p>IV. Shikuku, V., <b>Nyairo W.N.</b>, Kowenje, C. (2018). Preparation and Application of Biochars for Organic and Microbial Control in Wastewater Treatment Regimes in (book). Advanced Treatment Techniques for Industrial Wastewater, IGI global. Doi : 10.4018/978-1-5225-5754-8.ch002</p> <p>V. Shikuku, V., Kowenje, C., <b>Nyairo W.N.</b> (2017). Fundamentals and Sources of Magnetic Nanocomposites and their Sorption Properties in (book) Advanced Nanomaterials for Water Engineering and Treatment and Hydraulics, pp 636-655. IGI global. Doi : 10.4018/978-1-7998-8591-7.ch028</p>
<b>Professional body</b>	Kenya Chemical Society
<b><u>REFEREES</u></b>	<p>Dr. Chrispine Kowenje Maseno University P. O. Box 333-40105, Maseno Tel: 0736757294 E-mail: <a href="mailto:ckowenje@maseno.ac.ke">ckowenje@maseno.ac.ke</a></p> <p>Dr. Fredrick Kengara Maseno University P. O. Box 333-40105, Maseno Tel. 0716-544102 E-mail: <a href="mailto:fkengara@yahoo.com">fkengara@yahoo.com</a></p> <p>Dr. Solomon Omwoma Jaramogi Oginga Odinga University of Science and Technology P.O Box 210-40601, Bondo Tel. 0705-681121 Email: <a href="mailto:solomwoma@yahoo.com">solomwoma@yahoo.com</a></p>