

Staff Profile

Contact details

Department of [Pure and APPLIED chemistry](#)
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Links



Dr. Selline A.Ooko

(Describe your professional self: Maximum 200 words)

Dr. Selline Ooko holds a doctorate degree in Environmental Science specializing in Environmental Health Chemistry. Her areas of academic and research interest are in the fields of medicinal natural products and their application in the management of public health diseases. Her background as a long serving senior Head of Science at high school level also gives Selline skills and expertise in conducting Scientific research that link laboratory based teaching with science embedded in the environment, with an aim of improving performance in Science Technology, Engineering and Mathematics (STEM) at all levels of Education. Her major scholarly contribution is the establishment of a non-profit making organization; the *African Women in Science and Engineering (AWSE)* Western Chapter. Chaired by Selline, AWSE is actively involved in encouraging the participation of girls and women in STEM careers and forms a link between the community and MMUST. She currently serves as the Department deputy Chairperson of the Postgraduate Studies Committee, and Chairperson Income Generating Unit (IGU)

Some of her key published works include: -

1.Ebrahim Sande, Danstone Lilechi Baraza, **Selline Ooko** and Peter Kuloba Nyongesa. **Isolation, Characterization and Antibacterial Activity of Ergosta-5, 7, 22-triene-3 β , 14 α – diol (22Z) from Kenyan *Ganoderma lucidum*** Asian Journal of Chemical Science, 5(1): 48-57, 2020; Article no. DOI:10.9734/AJACR.54802 ISSN: 2582-0273

2. Ebrahim Sande, Danstone Lilechi Baraza, **Selline Ooko**, Nyongesa Peter Kuloba and Lilian Shiyenzi. **Phytochemical Screening and Antimicrobial Activity of Kenyan Mushroom *Ganoderma lucidum*** . 6(2): 1-6; Article no.DOI:109734/AJOCS.49349 ISSN: 2456-7795, , 2019

3.**Selline Ooko**¹, Festus K. Beru², Samson Madera Nashon³ and David Anderson³“contextualized science learning and student’s transition from secondary school to university: the case of a public day secondary school in Kenya” Proceeding of the International Conference on Future of Education, Vol. 1, pp. 63-73, , 2018.DOI:https://DOI.org/10.17501/26307413.2018.1109

4.Adelaide Baraza,Selline A. Ooko and Benard Omogo. **.Degradation of Dioxin-Like Compound,3,3,4,4-Tetra Chlorobiphenyl,(PCB 77) Using Palladium –Copper Bimetallic Aerogels.** IOSR journal of applied chemistry(IOSR-JAC)e-ISSN: 2278-5736.Volume 12, Issue 11 ser. i (November. 2019), PP 06-17 www.iosrjournals.org DOI: 10.9790/5736-1211010617

5.Anderson., S. Nashon., E. Namazzi.,, **S. Ooko**, P. Okemwa., P. Ombogo and F. Beru. **“Transformations in Kenyan Science Teachers’ Locus of Control: The Influence of Contextualised Science and Emancipated Student Learning”**.Journal of Science Teacher Education JSTE. D Vol 26. Pp.599-617. Feb. 2015.DOI:10.1007/s10972-015-9440-5

6.Nashon, S. M., Anderson, D., Okemwa, P., Kelonye, F., **Ooko, S.**, & Ombogo, P. (Under Review). **“Student Learning Impact on Science Teachers’ Teaching”: The Case of A Form 3 Science Class In Kenya.** Journal of Technology and Socioeconomic Development. Vol.4 No.1.2014

VIEW FULL CV HERE:

SELLINE AWINO OOKO (PHD)

SENIOR LECTURER; ORGANIC CHEMISTRY

PERSONAL RESUME



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1. PERSONAL DETAILS:

Nationality : Kenyan
Religion : Catholic
Date & place of birth: 1st July 1954, Alego, Siaya County.
Marital Status: Married
Language spoken: English, Luo, Kiswahili

2. EDUCATION

2012 **Doctor of Philosophy (D.Phil) Environmental Studies, Dept of Environmental Health and Biology, Moi University, Eldoret, Kenya**

D.phil research title: “**Antimicrobial activities of Endod (*Phytolacca dodecandra* L’Herit) extracts and its soap. Following a Knowledge, Attitude and Practices (KAP) Survey in Siaya, Busia and Nandi counties in Kenya.**”

2008 to 2010 **Doctor of Philosophy in Organic chemistry, University of Eldoret (Course work completed)**

2004 - 2006 **Master of Philosophy (M.phil) in chemistry – Moi University, Eldoret, Kenya.**

M.phil research title: Extraction and characterization of compounds from *Embelia schimperi* and their efficacies on *Anopheles gambiae* larvae and some common pathogens.

1975 – 1978 **B.Ed Science (B.Ed.Sc.), University of Nairobi, Nairobi, Kenya.**
Attained a second class honors degree, in Education, Chemistry and Geography.

1973 – 1974 **‘A’ Level: Alliance Girls High School, Kikuyu**

Principal passes in Chemistry, Biology and Geography

Subsidiary passes in Mathematics and General Paper

1969 – 1972

‘O’ Level: Ngiya Girls High School – Siaya, Div 1

3. PROFESSIONAL EXPERIENCE:

2020 to date	Senior Lecturer in the Departments of Pure and Applied Chemistry.
2012 to 2016.	Exam coordinator Pure and Applied Chemistry Department
2011 to date.	Lecturer in the Department of Pure and Applied Chemistry Masinde Muliro University, Kenya
2011.	Part time lecturer chemistry in Mount Kenya University
2009 to 2012.	Part time lecturer, in Environmental Chemistry. School of Environmental Studies Moi University
2009 to 20010.	Part time lecturer, in Organic and physical chemistry. School of Technology, Department of Chemical and Production Engineering, Moi University, main campus Eldoret.
2008 to date	Volunteer tutor in chemistry practical, Dept. Chemistry, Chepkoilel Campus, Moi University.
1986 to 2011:	Moi Girls High School, Eldoret A chemistry teacher of forms 5 and 6 and later forms 1 to 4 every year. HOD Science
1983 – 1986:	Rift Valley Technical High School, Eldoret

Chemistry Teacher of forms 4, 5 and 6.

1981 – 1983:	Upper Hill Boys, Nairobi Chemistry teacher of forms 5 and 6. Practical Geography teacher of forms 5 and 6.
1980 – 1981:	Lenana School, Ngong Chemistry Teacher of forms 5 and 6.
1978 – 1980:	Machakos Boys High School, Machakos Chemistry Teachers of forms 1 to 6.
1977:	Kisumu Girls High School, Kisumu Teaching Practice for 4 months
1975 - 1976:	Untrained Science Teacher (UT), Bikira Harambee Girls Secondary School, Siaya.

4. RESEARCH EXPERIENCE:

2020 to date	Investigation of <i>Senna didimobotria</i> and <i>Conyiza stricta</i> for their potency IN the management of selected human microbial infections.
2020 to 2022	Research on Adolescent Sexual and Reproductive Health amidst Covid- 19 pandemic in Lurambi sub –county, Kakamega County, Kenya.This research was sponsored by Masinde Muliro University under University Research fund,(URF).I am the PI
2020 to date	Screening of crude extracts from selected indigenous medicinal plant species {endod (<i>Phytolacca dodecandra</i>) and <i>Synadenium granty</i>}} for management of COVOD-19 in Kenya in collaboration with three Universities namely Rongo, Jaramogi Oginga Odinga University of Science & Technology (JOOUST) and Kabianga University

2020 to 2021	Teacher, School and home as effectiveness teaching environments, from students and parents Perspective; the effect of COVID19 Disease. A case study of KCSE candidates in Kenya.
2019 to date	Traditional Management of Cancer related ailments in Kenya using Natural Herbal Remedies.
2018 to 2020	Investigating If STEM Teachers use Girl Child Home Background in explaining Science Concepts. This research has been done Vihiga, Western part of Kenya. Data collection is still on going in Kisumu County, Kenya.
2007 to 2015	Co-coordinating research on “Contextualized Learning” (using Jua Kali as a science laboratory) at selected secondary schools in Uasin- Gishu County. This is a collaboration with Researchers from University of British Columbia (UBC) , Canada. We have conducted research in schools below;
2007 to 2008	Moi Girls, and UG Secondary
2008 to 2009	Wareng and Hill school
2009 to 2010	Magereza and Moi Chepkoilel
2010 to 2012	Chebissas Boys and Umoja
	The team is looking for more funds to extend the work to Kakamega County as collaborators with Masinde Muliro University.
2011 to 2013	A member of a research team sponsored by National Commission for Science and Technology (NCST). This is a collaborative research with 3 other female lecturers from different Universities namely, Jaramogi Oginga Odinga University, Kabianga and Maseno Universities. The research involves reducing Malaria prevalence in Lake Victoria Basin using a natural product (plant extracts)
2008 to 2010:	A study of antimicrobial activity of endod (<i>Phytolacca dodecandra</i>) extracts and an investigation into antiseptic property of a soap made from Endod. Part of D. Phil thesis
2007- 2008	KAP Survey on <i>Endod (Phytolacca dodecandra)</i> amongst the Nandi of Nandi County, the Luo of Siaya County, and the Luhyas/Luos of Busia County in Western Kenya (Part of D.Phil thesis).

2006-2007	The in vitro Anti-plasmodial activity of 22B-(S)-2-methyl-2-butenoxloxy}-3-oxyolean12en-28-oic acid on Choloroquine Resistant Indochinal W-2 Parasite clones
2005 to 2006:	Extraction and characterization of compounds from <i>Embelia schimperi</i> and their efficacies on <i>Anopheles gambiae</i> larvae and some common pathogens (M.Phil thesis).

5. RESEARCH COLLABORATION

2022	African Women in Science and Engineering (AWSE) Western – Masinde Muliro University (MMUST) chapter in collaboration with International Network of Women Engineers (INWES) is conducting Research in Secondary schools in Western Kenya to uplift the performance of the girl child in STEM subjects. I am the PI.
2020	Screening of crude extracts from selected indigenous medicinal plant species { <i>Phytolacca dodecandra</i> and <i>Synadenium granty</i> } for management of COVOD-19 in Kenya in collaboration with three Universities namely Rongo, Jaramogi Oginga Odinga University of Science & Technology (JOOUST) and Kabianga University
2018 to date:	MMust has entered into academic and research collaboration with the International Institute of Knowledge Management (TIKM), based in Srilanka, Colombo. I am the lead person in this collaboration
2008 to date;	<p>Co-researcher with Canadian-East African collaboration for the study of ways of knowing in science (CEACSWOK) project in Collaboration with university of British Columbia – Canada.</p> <p>Co-researcher with Canadian-East African collaboration for the study of science learning and pedagogy (CEACSSLAP) project with university of British Columbia Canada .The collaborative research data have been published in several education journals under contextualised science learning in Kenyan secondary schools.</p>
2011 to 2013	A member of a research team sponsored by NCST. This is a collaborative research with 3 other female lecturers from different Universities namely,

Jaramogi Oginga Odinga, Kkabianga and Masinde muliro. The research aimed at reducing malaria prevalence in Lake Victoria basin., Kenya.

6. PUBLICATIONS

1. Ebrahim Sande, Danstone Lilechi Baraza, Selline Ooko and Peter Kuloba Nyongesa. **Isolation, Characterization and Antibacterial Activity of Ergosta-5, 7, 22-triene-3 β , 14 α – diol (22Z) from Kenyan *Ganoderma lucidum*** Asian Journal of Chemical Science, 5(1): 48-57, **2020**; Article no. AJACR.54802 ISSN: 2582-0273

2. Ebrahim Sande, Danstone Lilechi Baraza, Selline Ooko, Nyongesa Peter Kuloba and Lilian Shiyenzi. **Phytochemical Screening and Antimicrobial Activity of Kenyan Mushroom *Ganoderma lucidum*** . 6(2): 1-6; Article no. AJOCS.49349 ISSN: 2456-7795, , **2019**

3. **Selline Ooko¹, Festus K. Beru², Samson Madera Nashon³ and David Anderson³** “**contextualized science learning and student’s transition from secondary school to university: the case of a public day secondary school in Kenya**” Proceeding of the International Conference on Future of Education, Vol. 1, pp. 63-73, , **2018**

4. Festus Kelonye¹, **Selline Ooko²**, Samson Madera Nashon³ and David Anderson³, “**Understanding STEM teachers’ Teaching: Framing Girl Child home Experiences as Curricular and Instructional Content**”. Proceeding of the Integrated Education for Real World 5th International –STEM in Education Conference Post Conference Proceedings, hosted by the Queensland University of Technology, Brisbane, Australia. 21-23rd, pp. 158-165, November **2018**

5. **Selline Ooko** and Dr. Festus Beru Samson Madera Nashon, David Anderson and Elizabeth Namazzi “**Contextualized Science Teaching and Student Performance. The Case of a Girls Science Class**”. The international Journal of Engineering Education; Vol 33, pp 1110-1116, Number 3, **2017**

6. Anderson., S. Nashon., E. Namazzi.,, **S. Ooko**, P. Okemwa., P. Ombogo and F. Beru. “**Transformations in Kenyan Science Teachers’ Locus of Control: The Influence of Contextualised Science and Emancipated Student Learning**”. Journal of Science Teacher Education JSTE. D Vol 26. Pp. 599-617. Feb. **2015**

7. Nashon, S. M., Anderson, D., Okemwa, P., Kelonye, F., **Ooko, S.**, & Ombogo, P. (Under Review). “**Student Learning Impact on Science Teachers’ Teaching**”: **The Case of A Form 3 Science Class In Kenya**. Journal of Technology and Socioeconomic Development. Vol. 4 No. 1. **2014**

8. Nashon S. M. Ooko, S., & Kelonye, F. B. (“**Understanding, Interpreting and Profiling Kenyan Students’ Worldviews of Science Learning**”. *Journal of Technology and Socio-Economic Development*. 1(1), 346-352, 2012.

9. Ooko Selline Awino, Paul Chepkwony Kiprono, Kipkemboi Pius Karonei, Festus Kaberia and Pius Obala, (2009). “**Larvicidal activity of 2,5-dihydroxy-3-methyl-1,4-benzoquinone from Embelia Schimperi**”. *Journal of Agriculture and Applied Science and Technology (JOPAST)* 1,12-13, 2009.

10. Akumu Edwin, Ndalut Kiptogon, Paul Chepkwony and Ooko Selline Awino (2009) “**The in vitro Anti plasmodial activity of 22B-(S)-2-methyl-2-butenoxloxy}-3-oxyolean12en-28-oic acid on Choloroquine Resistant Indochinal W-2 Parasite clones**” *Journal of Agriculture and Applied Science and Technology (JOPAST)* 1,33-39, 2009.

11. Ooko Selline Awino, Paul Chepkwony Kiprono, Kipkemboi Pius Karonei, Festus Kaberia and Pius Obala, “**Antimicrobial Activity of 2,5-dihydroxy-3-methyl-1,4-benzoquinone from Embelia Schimperi;**” *German Scientific Journal; Z. Naturforsch Vol.62C*, 2007.

6. CONFERENCES&PRESENTATIONS

1. **September,2021.** Selline Ooko, Festus Beru Samson Nashon Elizabeth. “**Transformations on Science Education as a result of Contextual Science Learning at a local Jua Kali Workshop;The case of selected Secondary Schools in Uasin Gishu,County,Kenya**”. Presented by Selline Ooko at **International Conference of Women Engineers and Scientists (ICWES18)**, held at Masinde Muliro University ,Kenya
2. **November 2020.** Selline Ooko, Festus Beru Samson Nashon Elizabeth Namanzi. “**Transformations on Science Education as a result of Contextual Science Learning at a local Jua Kali Workshop; The case of selected Secondary Schools in Uasin Gishu,County,Kenya**”. Presented by Selline Ooko at **.STEM Education International Conference 2020 (STEMEIC 2020)**,held at Masinde Muliro University ,Kenya
3. **October 2019** Selline Ooko, Festus Beru Samson Nashon Elizabeth Namanzi. “**Investigating Kenyan Primary School Teachers STEM Teaching Through a girl child’s Cultural Experiences/Knowledge Framework**” Presented by Selline Ooko at the International Conference on Education, Psychology, and Behavioral Science (**EPBS-2019**) held in **Istanbul, Turkey..**
4. **June/2019:** Selline Ooko, Festus Kelonye, Samson Nashon, Elizabeth Namanzi. “**Investigating Kenyan Primary School Teachers’ STEM Teaching Through Girl Childs Cultural Experience and Knowledge**”. Presented by Ooko Selline at the 2nd International Conference on Future of

Education 2019 “Empowering Learners in a Digital World” 13th – 14th June 2019 | **Bangkok | Thailand.**

5. **Nov/2018**, Selline Ooko, Festus Beru, Samson Nashon **“Understanding STEM Teachers Teaching: Framing Girl Child Home Experiences as Curricular and Instructional content”**
Presented by Ooko Selline at the **5th International STEM in Education** Conference held at the Queensland University of Technology (QUT), Brisbane., Australia.
6. **June/ 2018**; Ooko Selline **“The Potential use of an Indigenous plant endod by Local women to control infectious diarrheal diseases in LVB, Kisumu county, Kenya”**. “Presented by Selline Ooko at the First Pan African International Research Congress (PAIRC 2018). on Knowledge Generation and Dissemination in **Kisumu, Kenya..**
7. **June/2018**; Selline Ooko, Festus Beru, Samson Nashon and. David Anderson **“Contextualized Science learning and Student’s transition from Secondary School to University: The case of a public day secondary school in Kenya”**. Presented by Ooko Selline at **The 1st International Conference on Future of Education 2018, Colombo, Srilanka.**
8. **May/2018**; Selline Ooko **“Contextualized STEM learning and transition from Secondary School to University: The Case of a Day Secondary School in Kenya”**. Presented by Selline Ooko at” **The 2018 INWES Regional Conference &Annual Conference of the Tunisian Association of WomenEngineers (ATFI)** on 11th-13th May,2018, in **Tunis, Tunisia**
9. **Oct/2017**; Selline Ooko **“African Knowledge on endod (*Phytolacca dodecandra*) and its potential as a sustainable research resource and a science teaching aid in Kenyan schools** “Presented by Selline Ooko at 17th International Conference for Women Engineers and Scientists, (ICWES 17) on Oct 5-7th 2017, New Delhi, India
10. **Oct/2016**; Selline Ooko and Festus Beru. **“The impact of Contextualized Science Teaching and Student Performance in Kenyan National Examinations: The Case of a Girls Science Class and Kenya Certificate of Secondary Education (KCSE)”**. Presented by Selline Ooko and Festus Beru at **The STEM Conference, Beijing, China.**
11. **Oct/2016**; Festus Beru. and Selline Ooko. **“Challenges Facing Sustainable E-waste Management in Technical Vocational Educational Training Institutions: A case of Eldoret Municipality Kenya”** Presented by Festus and Selline at the **Fourth International STEM in Education Conference, Beijing, China.**
12. **Oct/2015**; Selline Ooko. **The impact of a local Jua kali workshop on School Performance in Kenya Certificate of Secondary Education (KCSE) Examination; The Case of a Form 3 Science Class in a Girls Secondary School in Kenya”**. Presented by Selline Ooko at **The International Network of Women Engineers and Scientists (INWES) Conference, in Kampala Uganda.**
13. **Oct/2015**; Selline Ooko. **“The Potential of Using a Natural Herbal Soap and Extracts from a Local Medicinal Plant Endod(*Phytolacca dodecandra*) to Control Infections due to Environmentally Associated Microbes in Kenya”**. Presented by Selline Ooko at **The**

International Network of Women Engineers and Scientists (INWES) Conference, in Kampala Uganda.

14. **Oct/2014; Dr. Selline A. Ooko and, Dr. Pamela Were-Kogogo**“**Application of Crude Natural Products from an Indigenous Plant, *Phytolacca dodecandra* (Endod) to Manage Malaria and Public Health Diseases by Local Women in the Lake Victoria Basin, Kenya**”. Presented by Ooko Selline and Were Pamela at The 16th International Conference for Women Engineers and Scientist (ICWES 16) Conference, Los Angeles, California USA .
15. **July/2014; Selline Ooko, Festus Beru ,Nashon and S. Anderson David.**“**African Indigenous Knowledge on Endod (*Phytolacca dodecandra* and its potential for medicinal uses in Kenya**”. Presented by Selline Ooko at The 3rd International STEM in Education Conference VANCOUVER, BC, CANADA.
16. **July/2014; Festus Beru and Selline Ooko.** “**An exploratory study on the Impact of Wood fuel Use and Planning Strategies for its sustainability in Western Kenya**” Paper Presented by Festus Beru and Selline Ooko at The 3rd Science Technology, Engineering and Mathematics (STEM) in Education, Conference , University of British Columbia, BC,Canada.
17. **May/2013; Madera Samson Nashon Ooko Selline, David Anderson, Festus Kelonye Beru, Peter Okemwa and Peterson Ombogo.** **Effective Group Learning: A Case of Perspectives from Kenyan High School Students**”. Presented by Selline Ooko atThe 3rd Annual International Conference on Advances in Technology and Socio–Economic Development (ATSED 2013), Eldoret Polytechnic, Kenya.
18. **May/2013; Manderia Samson Nashon, Selline Ooko and Beru Festus.** “**Kenyan Students’ Resonance with Contextualized Science: Critical Reflections on Traditional Science Curriculum and Instruction**”. Paper Presented by Selline Ooko at The 3rd Annual International Conference On Advances In Technology And Socio–Economic Development (ASTED 2013), Eldoret Polytechnic, Kenya..
19. **May/2012; Ooko Selline, Madera Samson, David Anderson, Peter Okemwa, Kelonye, F. and Peterson Ombogo.** “**Student Learning Impact on Science Teachers Teaching: The case of A Form 3 Science Class in Kenya**”. Presented by Selline Ooko at the First Annual International Conference On Advances In Technology And Socio–Economic Development (ATSED 2012), Eldoret Polytechnic, Kenya..
20. **May/2011; Manderia Samson Nashon, Ooko Selline and Festus Beru** “**Understanding, Interpreting and Profiling Kenyan Students World views of Science Learning**”. Presented by Selline Ooko at the First Annual International Conference on Advances in Technology and Socio–Economic Development (Atsed 2011), Eldoret Polytechnic, Kenya
21. **May/2011; Nashon, S., Ooko, S and Beru, F. (2011).**“**Understanding, Interpreting and Profiling Kenyan Students’ Worldviews of Science Learning.**”Paper Presented by Selline Ooko at The First Annual International Conference on Advances in Technology and Socio–Economic Development (ATSED 2011), Eldoret Polytechnic, Kenya.

7. LEADERSHIP AND RESPONSIBILITIES:

- 2017 to Date;** Chairperson of African Women in Science and Engineers (AWSE) Western -MMUST Chapter (Masinde Muliro University Chapter))
- 2019 to date** Chairperson Income Generating Unit (IGU) in Department of Chemistry MMUST.
- 2014-2016** Member of Taskforce for Establishing new University Colleges at 1; Busia Ugunja Mumias, and 2; Kisumu, Kericho, Nakuru
- 2012 to 2016;** Examination and Time Table Coordinator, Pure and Applied Chemistry (PAC) Department, Masinde Muliro University.
- 2013/2014** In-charge of 4th year chemistry student at Masinde Muliro University
- 2011/2013** In-charge of 1st year student at Masinde Muliro University
- 2000 to Aug 2011;** Senior Head of Department Science (S.H.O.D.) Moi Girls High School Eldoret
- 2001 to 2002:** Deputy Chairperson of Work Improvement Team (WIT) ,Moi Girls High School
- 1991 – 2000:** H.O.D. Physical Sciences at Moi Girls High School, Eldoret
- 1985-1990:** Head of Subject (HOS) Chemistry Upper Hill Boys, Nairobi
- 1981-1985** H.O.S Chemistry Lenana School Nairobi
- 1978 – 1980:** H.O.S. (Head of Subject) Chemistry Machakos Boys
- 1978-1980:** Patron of Science Club at Machakos Boys.

1969 – 1972: A class prefect from form I to form IV at Ng'iya GirlsHigh School, Siaya.

8. NATIONAL AND OTHER RESPONSIBILITIES

2017 to Date; Chairperson, African Women in Science and Engineers (AWSE) Western-MMUST Chapter.

2020 to date; Chairperson Income Generating Unit in Department of Chemistry MMUST.

2012 to date; Organizer and participant of academic field trips for Environmental Chemistry students

2012-2017; Exam coordinator Pure Applied Chemistry Department

2011 to Date; Supervisor and adviser of Masinde Muliro University Education and Bsc. Students on school and Industrial attachment.

Trained Examiner for Kenya National Examinations

Year 1978 Exams Examined: -

1983 – 1986: 'A' Level, P3 practical Chemistry (KACE)

1981 – 1982: 'O' Level, P3 practical Chemistry (KCSE)

1980: Kenya Junior, Physical Science (KJSE)

9. TRAINING AND CERTIFICATION

January,28/2022. Attended a workshop on Inclusion and Diversity in Chemical Sciences, Motivation and Promotional Activities for Chemical careers for Girls and Teachers in Rural Secondary Schools in Western Kenya. The activity was at Indangasia Secondary School near Butula in Busia county, Kenya

October, 2021. Attended and trained in a workshop, at Bishop Stam in Kakamega. The training was on gender sensitization and disability.

October, 25th, 2019. Attended and was trained in a workshop on, Developmental Psychology without Positivistic Pretentions” by Professor Willem Koop in Istanbul, Turkey.

October, 25th, 2019. Attended and was trained in workshop on, “Implementing Learning Analytics in A higher Education Institution; Issues and Considerations”, by Dr. Bronwen Swinnerton in Istanbul, Turkey.

August 2019; attended and Trained at a **Models of 3-day Research Workshop** at MMust on 5-7th August 2019. Facilitated by Dr. Anthony Kambi Masha of Walter Sisulu University (WSU) South Africa, under merSETA Project.

March, 2019; Successful Participation in “**The Kenya Institute for Research and Analysis (KIPPRA) Mentorship Programme for Universities (KMPUS) themed Policy Making Process and the ‘Big Four’ Agenda**”, held at MMust on 18th March 2019

August 28th 2018: ISO 9001; 2015 Transition Training, In MMust MCU

July 2017; Kenya Chemical Society/ KCS Workshop on Chemical Security and Vulnerability training, at Kisumu

October 2015; Sanitation Research Symposium at the Great Lakes University of Kisumu (GLUK), in the lakeside city of Kisumu, Western Kenya.

2014 Curriculum Development at the University

2008 Environmental Impact Assessment (**EIA**), Trained by Moi University

2003 Effective Performance Management in schools; Trained by Ministry of Education and Technology.

1999 Duties of Head of Department (HOD); Trained by Ministry of Education Science and Technology.

1980 National Examiner in Chemistry; Trained by Kenya National

Examination Council. I was a national examiner in chemistry (both A-level and O-level) for many years.

1975-1978; Trained by Ministry of Education to be a Graduate Science teacher (Bed Science), then got employment by The TSC in September 1978, (TSC No.134868). Successfully worked

under TSC as a high school Science teacher and Head of Science Departments for 33 good years (1978 to 2011).

1. RESEARCH SUPERVISION

PhD in Chemistry, Supervision

1 Ebrahim Sande Anyimba, SCH/G/05/11 ,

Thesis title ; Investigation of *Senna didimobotria* and *Conyiza stricta* for their potency in the management of selected human microbial infections.

Masters in Chemistry, Supervision

1. Ebrahim Sande Anyimba, SCH/G/05/11 ,

Thesis Title; Phytochemical and Antimicrobial Properties of Local Species of *Ganoderma lucidum* and *Termitomyces letestui* against Clinically Selected Microbes.(**Has defended and passed .To graduate in 2020).**

2 Adelaide K. Baraza SCH/G/2/2013,

Thesis Title, Investigating the destruction of dioxins and dioxin like compounds using nanoparticles of palladium/magnesium anometallic (nanosize pd/mg bimetallic). (**Has defended and passed. To graduate this year 2020).**

2. Florah Chirikona, SCH/G/02/11

Thesis Title; Occurrence and discharge of Perfluoroalkyl Acids in selected waste water treatment plants within Lake Victoria catchment area, Kenya.(**Student graduated in 2016).**
Undergraduates in Industrial and Bsc Chemistry

2011 to Date; Undergraduate Supervision; I have been supervising 4th year chemistry student's projects especially those based on **Environmental pollution and Natural products.**

3. OUTSTANDING ACHIEVEMENTS:

1. **2018;** I have managed to link MMust with the Research based organization;The International Institute of Knowledge Management (TIKM) based in Srilanka. MMust is now in collaboration with TIKM on academic basis. The benefits are numerous.
2. **2017;** I introduced a new Association in MMust; **African Women in Science and Engineers, (AWSE)**. This is a branch of International Network of Women Engineers and Scientists. (INWES).This is now a strong organization in MMUST.
3. I successfully organized a one-day seminar and Lounge of AWSE Western-MMUST Chapter, in Masinde Muliro University of Science and Technology (MMUST)Campus. The occasion brought in Senior Women Scientists as guest speakers.
4. I am the current chair of AWSE Western-MMUST chapter
Under my chairmanship AWSE has achieved a lot, since is inauguration in 2017. Below is a summary of AWSE achievements;
 - 4/11/2021, Chebwai Adventist Complex. I organize AWSE Team for a very successful outreach activity to the complex.
 - As a **PI** of a research under AWSE.We have completed research Titled, **“University -Community led Response to Adolescents Sexual and Reproductive Health in the wake of Covid -19 Pandemic”**
 - **2020 to date/ ongoing;** We have established an continuous outreach activity with a **day mixed secondary school closest to MMust campus,Mwiya mixed Day Secondary school, with aim of helping in STEM subjects.**
 - 2020, Mentorship and sanitary pad donation to **Lurambi and Amalemba** primary schools.
 - **18/2/2019; Outreach and Research activity in Losengeli Day Secondary School, Sabatia.** AWSE Members donated **three lab tops** to Losengeli Mixed Secondary School and spent a whole day at the school mentoring both teachers and students
 - **2018; Outreach to Moi University School of Engineering;** Seven AWSE members led by Lady Dean of Faculty of Engineering, travelled to Moi University on invitation by Engineering students on their Fair Day. They had a successful day giving speeches and acting as role models.
 - **2018, International Day for the Girl Child;**
Outreach activity was organized in MMust campus .With the theme of; HOW TO REACH THE GIRL CHILD, AWSE invited Women Groups, Children from orphanage, secondary school girls from around the University, and the MMust girl child

fraternity. All were addressed by The VC, DVCs and other speakers from MMUST community with the objective of encouraging the Girl Child.

- **ENVIRONMENTALDAY, 2017 MMust Women** Scientists and students planted 250 trees in MMust main and Webuye campus. Forest and environmental experts gave short speeches related to women and science and the day's activity

5.2007-2008; Was able to register for two PhDs (2007and 2008).I managed to sit the requisite exams within the set period and was still able to continue with my teaching assignments at Moi Girls High School. My class recorded the best performance in the National exams.

6. As a team, we were able to push **Moi Girls High School** from between position 21-35 nationally to the top 5 best girls' schools in the country. The standards of Science subjects continued to improve yearly. I am glad to have contributed to its glory.

12. HONORARY AWARDS (4 AWARDS)

- 1. 2018; Received award for BEST SESSION PRESENTER**, during paper presentation at the Future of Education Conference in **Colombo Srilanka**. The paper was Titled, "Contextualized Science learning and Student's Transition from Secondary School to University: The Case of a Public Day Secondary School in Kenya".
- 2. 2016; Received award for SENIOR RESEARCHER OF THE YEAR** during the second MMUST Gala Dinner and 2016 Awards ceremony held on Friday,23rd December,2016 at Multipurpose Hall, **MMUST ,Kenya**
- 3. 2016;** October, Received "**THE BEST PAPER AWARD** at STEM 2016 Conference in **Beijing, China**. The paper was titled "The impact of Contextualized Science Teaching Workshop on Student Performance in Kenyan National Examinations: The Case of a Girls Science Class and Kenya Certificate of Secondary Education (KCSE
- 4. 2014;** July. Received '**THE BEST PAPER AWARD** 'at STEM 2014 Conference in **Vancouver Canada**. The paper was titled 'African Indigenous Knowledge on Endod (*Phytolacca dodecandra* and its potential for medicinal uses.

13. HOBBIE;S:

1. Teaching and interacting with students at all levels
2. Small scale vegetable and fruit farming
3. Preserving the environment at a small scale

CLUBS AND ASSOCIATIONS

- a. A member of Eldoret club
- b. A member of International Network of Women Engineers and Scientists (INWES)
- c. A member of African Women in Science and Engineering (AWSE)
- d. A member of Kenya Chemical Society member (KCS)
- e. A member of St Veronica, small Christian Community under the Sacred Heart of Jesus Cathedral, Eldoret.

14. REFEREES:

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