

Curriculum Vitae

Personal information

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Date of birth: 01.08.1979
Nationality: Kenyan

Biography

Solomon Omwoma Lugasi is a lecturer of Inorganic and Environmental Chemistry at the Department of Physical Sciences, Jaramogi Oginga Odinga University of Sciences and Technology. His research covers environmental remediation chemistry, toxicology, Inorganic materials, and biogenic nanomaterials. He has two (2) Kenyan patents, twenty-three (23) peer reviewed publications, six (6) peer reviewed book chapters and one (1) university level book. Apart from Chemistry, he also has a Master's degree in Intellectual Property.

Contents

Education/Academic training	3
Professional appointments.....	3
Awards and honors	3
Professional affiliations.....	4
Funded research grants	4
List of publications.....	4
A) Books/Dissertations.....	4
B) Book Chapter(s).....	5
C) Patents.....	5
D) Articles in peer reviewed journals	5
E) Conferences Attended and Papers Presented.....	7
Workshops/webinars attended	9
Participation in agricultural shows and Exhibitions.....	10
Graduate student supervision record	10
(a) Completed PhD students	10
(b) Completed MSc students	10
(c) On-going PhD. students	10
(d) On-going M.Sc. students.....	11
Memberships in panels, examination and review activities	11
Reviews	11
Course development.....	11
Charity (Donations).....	12
Community Service.....	12
Referees.....	12

Education/Academic training

1. Doctor of Science (Chemistry), Beijing University of Chemical Technology, Beijing, China. Sept. 2012 – Dec. 2015. A scholarship by the China Scholarship Council. Thesis Title: Polyoxometalate intercalated layered double hydroxides: From synthetic approach to functional material applications.
2. Masters in Intellectual Property, Africa University, Zimbabwe, May 2020 to July 2021. A scholarship by the Japanese patent office, World intellectual Property and Africa Region intellectual Property Organization. Thesis title: Management of Intellectual Property by Technology and Innovation Support Centres (TISCs) in Kenya.
3. Master of Science (Chemistry), Maseno University, Kenya. Sept. 2008 – Dec. 2010. Thesis title: Effects of nitrogenous fertilizers on soil and water physicochemical parameters in sugarcane farms, Kenya.
4. Bachelor of Education Science (Chemistry and Mathematics), Maseno University, Kenya. Sept. 2000 – Sept. 2006.

Professional appointments

1. July 2022 to date- Senior Lecturer, Jaramogi Oginga Odinga University of Science and Technology.
2. December 2016 – June 2022 To date: Lecturer, Jaramogi Oginga Odinga University of Science and Technology.
3. Jan. 2017 to May 2020 – Examination officer for the Department of Physical Sciences, Jaramogi Oginga Odinga University of Science and Technology.
4. Dec. 2015 – Dec 2017: Part time Lecturer, Maseno University.
5. Sept 2010 – Sept. 2012: Part time Lecturer, Jomo Kenyatta University of Agriculture and Technology.
6. July 2016 – Dec 2016: Teacher, Keveye Girls, Teachers Service Commission of Kenya.

Awards and honors

1. August 2021 – August 2021: Two weeks staff exchange program at JKUAT sponsored by ACE II- INSEFOODS Project
2. Sept 2019 – Sept 2019: World Intellectual Property Training in Harare Zimbabwe. A one-week intensive training on patent drafting skills sponsored by the World intellectual Property and Africa Region intellectual Property Organization.
3. Jan. 2018 – May 2018: Postdoctoral Research Fellowship. Project title: Dioxin-like PCBs and PCDD/Fs in surface sediments near the shore of Winam Gulf, Lake Victoria, Kenya. Sponsored by Alexander von Humboldt Foundation of Germany through the Group Linkage Program (Ref. No. 3.4-Fokop-DEU/1064266).
4. Sept. 2012 – Dec. 2015: Doctorial Research fellowship by the Ministry of Education, Kenya and Chinese Scholarship Council

Professional affiliations

1. Kenya Chemical Society (member), Secretary General, Western Chapter (2017 to date)
2. Royal Society of Chemistry (RSC) (member)
3. Environmental Chemistry Group (RSC member)
4. Toxicology Group (RSC member)
5. Water Science Forum (RSC member)

Funded research grants

1. Royal Society of Chemistry, Diversity and Inclusion fund 2022: 700,000 Ksh. Attitude change towards sciences in Primary School students.
2. 2022-2024, "Environmental Chemistry for Sustainable Development", APPEAR Academic Partnership, € 373,050.15, Project 249 (Co-Investigator).
3. Received 200,000 from the Royal Society of Chemistry to train high school prefects on chemical security, through the Kenya Chemical Society in 2019
4. Received a consignment of instruments and apparatus from Helmholtz Zentrum Center in excess of 30, million Kenya shillings as residual value and over 300 million market price values for starting a research laboratory at Jaramogi Oginga Odinga University of Science and Technology in 2018.
5. Received 67,410 Kenya shillings from Atomic Spectrometry Updates 'The Allan Ure Bursary for 2017' for construction of teaching and learning apparatus on water treatment technologies at Jaramogi Oginga Odinga University of Science and Technology.
6. National Research Fund, Ksh. 12,000,000. 00 under Prof. Lalah as the principal investigator. Research title: Environmental and human health indicators of chemical pollution from large scale farming and industries in Kenya: capacity building for sustainable development. 2017 award. Zedekiah Odira is the PhD student at Jaramogi Oginga Odinga University of Science and Technology doing research under this fund.

List of publications

A) Books/Dissertations

1. Solomon Omwoma (2015): Polyoxometalate intercalated layered double hydroxides: From synthetic approach to functional material applications, Doctoral thesis, Beijing University of Chemical Technology, Beijing, China., 145 pp.
2. Omwoma S., (2012). Environmental impacts of sugarcane farming, Kenya: effects of nitrogenous fertilizer use on Soil and water chemistry within the sugarcane farms.

Lambert Publishers, Lambert Academic Publishing AG & Co KG. ISBN: 10-3848423901, ISBN: 13-9783848423903, Jan. 2012, Paperback, 96 pages.

B) Book Chapter(s)

1. Lalah J. O. and Omwoma S., (2019). Aflatoxin B1 – Chemistry, Environmental and Diet Sources and Potential Exposure in Human in Kenya; In Aflatoxin B1 Occurrence, Detection and Toxicological Effects (EDS: Xi-Dai Long). Published by IntechOpen Limited, England. DOI: <http://dx.doi.org/10.5772/intechopen>
2. Omwoma S., (2019). Condensation of WO₄²⁻ Polyhedra Units on Layered Rare Earth Hydroxides Nanosheets: Hierarchical Channels and Heavy Metal Adsorption; In Metal-Organic Framework Composites (Eds: Anish K., Bahaa M. A., Mahmoud A. H., Abdallah M. A. and Mohammad A.) Volume I. Publisher: Materials Research Forum, Millersville USA.
3. Lalah J. O., Omwoma S., Osano F.O., Mukunda E., Shivoga W.S., Wafubwa G., Muyekho D., Schramm K.-W., (2018). Chapter 16 - Assessment of Potential Risks and Effectiveness of Agrochemical Usage in a Catchment: A Case Study of the Nzoia Nucleus Estate Sugarcane Farms in Western Kenya, in: B. Maestroni, A. Cannavan (Eds.) Integrated Analytical Approaches for Pesticide Management, Academic Press 2018, pp. 235-259. doi.org/10.1016/B978-0-12-816155-5.00016-6
4. Omwoma S., Chen W., Gore C.T., Song Y.-F., (2014). Polyoxometalate-containing multifunctional materials In Trends in polyoxometalate research (L. Ruhlmann and D. Schaming, Ed). Nova Science Publishers Inc., Hauppauge, New York, USA, ISBN: 978-1-63482-656-3 (Hard cover), pp. 281-354.
5. Omwoma S., Arowo M., Lalah J.O., Schramm K-W., (2014). Environmental impacts of sugarcane production, processing, and management: A chemists perspective, In Sugarcane: production, consumption and agricultural management systems (Eleanore W., Ed). Nova Science Publishers Inc., Hauppauge, New York, USA, ISBN: 978-1-61122-356-9(Hardcover), (pp. 293-330).

C) Patents

1. Omwoma S. and Jaramogi Oginga Odinga University of Science and Technology, (2018). Enhancement of the red-light luminescence from [EuW₁₀O₃₆]⁹⁻ anion. Kenyan patent No. KE 882
2. Omwoma S. and Jaramogi Oginga Odinga University of Science and Technology, (2018). Lanthanide double hydroxide nanocomposite materials and their application in measurement of heavy metals in aquatic systems. Kenyan patent No. KE/P/2018/2880.

D) Articles in peer reviewed journals

1. Stephen Adongo Odongo, Solomon Omwoma Lugasi, Fredrick Oluoch Okumu, Silas C. Lagat, Martin Opiyo Onani, Stephen Gaya Agong. 2022. Biogenically Synthesized

- Silver/Gold Nanoparticles, Mechanism and their Applications: A Review. *Asian Journal of Chemical Sciences*, 1-18. doi: 10.9734/ajocs/2022/v11i219116.
2. Solomon Omwoma Lugasi, Mercy Ouma Adhiambo, 2022. Implementation of Technology and Innovation Support Centers (TISCs) in Kenya: Challenges and opportunities. *Technology in Society*, in press: <https://doi.org/10.1016/j.techsoc.2022.101907>.
 3. Solomon Omwoma* (2020). Design and Synthesis of Reusable Nanoparticles for Reversible Chemisorption of Hexavalent Chromium Anions from Aqueous Media and Catalysis. *Journal of Chemistry* 2020, 1-17. <https://doi.org/10.1155/2020/6375749>
 4. Ssebugere P.*, Sillanpaa M., Matovu H., Wang Z., Schramm K.-W. Solomon Omwoma, Wanasolo W., Chelangat N. E., Odongo S., (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.
 5. Omwoma S.* 2020. Trace metal detection in aqueous reservoirs using stilbene intercalated layered rare earth hydroxide tablets. *Journal of Analytical Methods in Chemistry*, 2020. <https://doi.org/10.1155/2020/9712872>
 6. Omwoma S.* Odongo A. S., Otieno Z., Lagat S and Lalah J. O., (2020). Layered Rare-Earth Hydroxide Unilamellar Nanosheets: Synthesis, Characterization, and Adsorption. *Journal of Chemistry*: 2020. 1-11. Doi: <https://doi.org/10.1155/2020/8923871>.
 7. Omwoma S.*, Mbithi B. M., Pandelova M., Ssebugere P., Lalah J. O., Wang Y., Bi Y., Henkelmann B., Schramm K.-W., (2019). Corrigendum to “Comparative exposomics of persistent organic pollutants (PCBs, OCPs, MCCPs and SCCPs) and polycyclic aromatic hydrocarbons (PAHs) in Lake Victoria (Africa) and Three Gorges Reservoir (China)” [*Sci. Total Environ.* 695, (2019) 133789]. In press, <https://doi.org/10.1016/j.scitotenv.2019.134820>. (Elsevier)
 8. Omwoma S.*, Silah C. L., Lalah J. O., (2018). Fine tuning the microenvironment of [EuW10O36]9anion leads to the large enhancement of the redlight luminescence, *Journal of Luminescence*, 6, 294-301 (Elsevier).
 9. Omwoma S.*, Lalah J. O., Kueppers S., Wang Y., Lenoir D., Schramm K.-W., (2017). Technological tools for sustainable development in developing countries: The example of Africa, a review. *Sustainable Chemistry and Pharmacy* 6, 67–81 (Elsevier).
 10. Omwoma S. Lugasi. *, (2017). New synthetic pathways for thiocarbohydrazide and salicylaldehyde azine compounds. *Asian Journal of Chemical Sciences* 3(1): 1-8.
 11. Omwoma S.*, Lagat S. C., Lalah J. O., Owuor P. O., Schramm K.-W., (2017). Recent advances on mercury speciation in aquatic ecosystems, health effects and analytical techniques. *British Journal of Applied Science & Technology* 19(1): 1-37.
 12. Makena J. M., Omwoma S.* (2017). Nonlinear H^∞ Guidance Design for Missile against Maneuvering Target. *Advances in Research* 9(4): 1-21.
 13. Ongeru D.M.K.*, Omwoma S., Lalah J.O., Schramm K.-W., Michalke B. (2017). Enrichment of Hg, Sn, As, Al, Mn and Fe in Surface Sediments and Surface Water of Winam Gulf, Lake Victoria. *Journal of the Kenya Chemical Society* 10(1), 70-75.

14. Gore C. T., Omwoma S., Chen W., Song Y.-F.*, (2016). Interweaved LDH/PAN nanocomposite films: Application in the design of effective hexavalent chromium adsorption technology, *Chemical Engineering Journal*, 284, 794–801 (Elsevier).
15. Omwoma S.*, Gore C.T., Ji Y., Hu C., Song Y.-F. (2015). Environmentally-benign polyoxometalate materials, *Coordination Chemistry Reviews*, 286, 17–29 (Elsevier).
16. Omwoma S.*, Lalah J. O., Virani M., Schramm K-W., Henkelmann B. (2015). Dioxin-like PCBs and PCDD/Fs in surface sediments near the shore of Winam Gulf, Lake Victoria, *Chemosphere*, 118, 143–147 (Elsevier).
17. Lin C.-G. *, Chen W., Omwoma S., Song Y.-F. (2015). Covalently grafting non mesogenic moieties onto polyoxometalate for fabrication of thermotropic liquid-crystalline nanomaterials, *Journal of Material. Chemistry: C*, 2015, 3, 15-18, (Royal Society of Chemistry).
18. Omwoma S*, Owuor, P. O., Ongeru, D. M. K., Umani, M., Lalah, J. O., Schramm, K.-W. (2014). Declining commercial fish catches in Lake Victoria's Winam Gulf: The importance of restructuring Kenya's aquaculture programme, *Lakes & Reservoirs: Research & Management*, 19, 1–5, (Wiley).
19. Omwoma S*, Arowo M., Lalah J. O., Schramm K-W. (2014). Environmental Impacts of Sugarcane Production, Processing and Management: A Chemists Perspective, *Environmental Research Journal*, 8(3) 195-223. (Nova Science Publishers)
20. Omwoma S*, Lalah J. O., Ongeru D. M., Schramm K. W. (2014). The impact of agronomic inputs on selected physicochemical features and their relationships with heavy metals levels in surface sediment and water in sugarcane farms in Nzoia, Kenya. *Environmental Earth Sciences*, 71, 4297– 4308, (Springer).
21. Omwoma S., Chen W., Tsunashima R., Song Y. F*. (2014). Recent advances on polyoxometalates intercalated layered double hydroxides: From synthetic approaches to functional material applications. *Coordination Chemistry Reviews*, 258, 58-71, (Elsevier).
22. Omwoma S*, Omwoyo W.N., Alwala J.O., Ongeru D.M.K., Sylus L.C., Lalah J.O., (2013). Nutrient reduction in runoff water from sugarcane farms by sedimentation method. *Environment Systems and Decisions*, 32(4) 494-502.
23. Omwoma S*, Lalah J.O., Ongeru D.M.K. (2012). Impact of agronomic inputs in sugarcane farming on total heavy metal levels in aquatic ecosystems and soils within Lake Victoria basin, Kenya. *Kabarak Journal of Research and Innovation*, 2012-01, 102-118.
24. Omwoma S., Lalah J.O*, Ongeru D.M.K., Wanyonyi M.B. (2010). Impact of fertilizers on heavy metal loads in surface soils in Nzoia nucleus estate sugarcane farms in Western Kenya. *Bulletin of Environmental Contamination and Toxicology*, 85(6):602-8.

* = Corresponding author

E) Conferences Attended and Papers Presented

- 1) Omwoma S., (2019). Technological tools for sustainable development in developing countries: The example of Africa. The 2nd Jaramogi Oginga Odinga University of Science and Technology International Conference: 26th Feb – 1st Mar 2019, held at Grand Royal Swiss Hotel Kisumu.
- 2) Omwoma S., (2018). Technological tools for sustainable development in developing countries: The example of Africa. The 5th HUMBOLDT “KOLLEG” 2018 “The role of Alumni Networks in Mentorship and Collaboration in Multidisciplinary Research: Foundation for Kenya’s Vision 2030.” Held at Sportsman’s Arms Hotel Nanyuki, Kenya. June 19th – 21st, 2018
- 3) Schramm K. W., Omwoma S., Ssebugere P., Kueppers S., Wang Y., Bi Y., Henkelmann B., Mbithi
- 4) B. M., Pandelova M, Lalah J. O. (2018) Virtual Organisms for Comparative Exposomics, TUK –
- 5) AvH International Workshop on Ecosystem Services: Lake Victoria versus Three Gorges Reservoir (TGR), 5th – 8th December 2017, Kisumu Hotel, Kenya.
- 6) Omwoma S., Lagat C.S. Reusable Fe₃O₄@SiO₂@LEuH@PW10 nanocomposite material for reversible chemisorption of hexavalent chromium anions from aqueous media, Kenya Chemical Society 9th International Conference, 9th May – 12th May 2017, At the United States International University – Africa.
- 7) Lagat C.S, Southway C., Jaganyi D., Omwoma S., The Dissipation of the hexazinone in tropical soils under controlled laboratory conditions, Proceedings of the Expert Workshop: Sustainable use of Water resources, July 3-8, 2016-Kisumu Kenya pages 42-51: ISSN 978-37369-9453-9.
- 8) Omwoma S., Owuor, P.O., Onger, D.M.K., Umani, M., Lalah, J.O., Schramm, K.-W. (2014). Declining commercial fish catches in Lake Victoria’s Winam Gulf: The importance of restructuring Kenya’s aquaculture programme. Pan African Chemistry Network Congress on Biodiversity and Global Challenges, 01 – 02 Dec. 2014, Addis Ababa, Ethiopia.
- 9) Omwoma S. (2014). The beginning of the end. A speech delivered to international graduates at Beijing University of Chemical Technology on their final day on Campus (Best student 2014).
- 10) Zhao S., Liu L., Omwoma S., Chen Y., Song Y.-F. (2013). Highly selective and efficient oximation of aldehydes by reusable heterogeneous sandwich-type polyoxometalate catalyst. The Fifth National Symposium on Polyoxometalate Chemistry, Herbin, China, 15-19 July 2013.
- 11) Omwoma S., Umani, M., D.M.K. Onger, J.O. Lalah, K-W. Schramm. (2012). Declining fish population and biodiversity in Lake Victoria Kenya: Possible management options. NALMS' 32nd International Symposium November 7 - 9, 2012, Madison, Wisconsin, USA.
- 12) Lalah J. O., Omwoma S., Onger D.M.K. (2012). Assessment of selected physicochemical features of sediment and water and their relationship with heavy metals in sugarcane farms in Nzoia, Kenya. 4th International Congress Eurosoil 2012, Bari-Italy 2-6 July 2012.

- 13) Omwoma S., 2012. Declining fish population in Lake Victoria Kenya: Possible Management Option. First national science, technology and innovation week, KICC, 7th -11th May 2012, Nairobi Kenya.
- 14) Omwoma S. (2012). Nanotechnology and material science conference. The Inaugural Conference on Nanotechnology and Material Science in Kenya, 18th – 20th July 2012. Kenyatta University.
- 15) Omwoma S. Lalah J.O., Ongeru D.M.K. (2011). Impact of agronomic inputs in sugarcane farming on total heavy Metal levels in aquatic ecosystems and soils within Lake Victoria. Basin, Kenya. Proceedings of 2011 Kabarak University 1st annual international research conference. Eldoret, Kenya, 161-175, 2011.
- 16) Omwoma S., Lalah J.O., Ongeru M.K.D, Alwala J.O. (2011). Nutrient removal from runoff water in sugarcane farms within Lake Victoria basin Kenya before discharge into the river systems. 1st PACN Congress on Agricultural Productivity 21-23 November 2011. Accra International Conference Centre, Accra, Ghana.
- 17) Omwoma S., Lalah J.O., Ongeru M.K.D, Alwala J.O. (2011). Nutrient reduction in runoff water from sugarcane farms by a sedimentation method. The Sixth JKUAT Scientific Technological and Industrialization Conference; Science, Technology, and Innovation: Towards Sustainable Development. Nairobi Kenya 16th – 18th November 2011.
- 18) Omwoma S., Lalah J.O., Ongeru M.K.D, Owuor P.O., (2011). The impact of agronomic inputs in sugarcane farming on surface river water quality in the Lake Victoria Catchments. National Council for Science and Technology of Kenya conference on dissemination of research results held on 3rd to 6th May 2011 at KICC Nairobi Kenya.

Workshops/webinars attended

- 1 Omwoma S. (2019). WIPO Patent Drafting Course for the ARIPO Member States and Observer States. Organized by the World Intellectual Property Organization (WIPO) in cooperation with the African Regional Intellectual Property Organization (ARIPO) and with the assistance of the Japan Patent Office (JPO. Harare, September 2 to 6, 2019.
- 2 Omwoma S. (2018). LC-MS: A hands on approach: from sample preparation to data interpretation. Held at Jomo Kenyatta University of Agriculture and Technology, Kenya. Sponsored by The Royal Society of Chemistry and GSK (20/08/2018 to 24/08/2018).
- 3 Omwoma S. (2018). Enhancing Staff Knowledge and skills for professionalism and quality standards in learning/Teaching processes. Held at JOOUST, 26 -27 June 2018.
- 4 Omwoma S. (2017). GC-MS: A hands on approach: from sample preparation to data interpretation 03/04/2017 – 07/04/2017, Jomo Kenyatta University of Agriculture and Technology, Kenya. Sponsored by The Royal Society of Chemistry and GSK.

- 5 Omwoma S. (2012). Regional proposal writing workshop organized by DAAD scholars association in collaboration with DAAD and NCST. Masinde Muliro University, Kenya.
- 6 Omwoma S. (2012). PACN-INASP workshop on scientific writing and grant application. The university of Nairobi.
- 7 Omwoma S. (2011). Regional proposal writing workshop organized by DAAD scholars' association in collaboration with DAAD and NCST. Maseno University, Kenya.

Participation in agricultural shows and Exhibitions

1. Kisumu ASK show 2019: Exhibited various projects including: a green urban household portable biogas set (@45000Ksh) that uses household waste to produce biogas; A fordable highly nutritious fish fingerlings feed; soil analysis techniques; atom economy of electronic wastes; and a waste water treatment model machine.
2. Kisumu ASK show 2018: Exhibited a project on turning wet waste to dry waste using sun concentrators and a rotating packed bed reactor that generated OH radicals for organic pollutants degradation.

Graduate student supervision record

(a) Completed PhD students

1. Gertrude Estelle, PhD Biochemistry, University of Yaoundé, Cameroon. Thesis Title: Diversity and fertility of freshwater shrimps *Macrobranchium* (Herklots 1851) *Decapoda: Palaemonidae* in the Nyong Basin in Cameroon (Completed 2021).

(b) Completed MSc students

- 1 Fanny Chivembere, MSc Chemistry, Chancellor College, University of Malawi. Title of Thesis: Low-Cost Surface and Wastewater Purification: Synthesis and Characterisation of Activated Carbon from Tobacco Stems and Groundnut Shells for Removal of Amoxicillin and Cypermethrine (completed 2021).
- 2 Joel, Njewa, MSc Chemistry, Chancellor College, University of Malawi. Title of Thesis: Preparation and Characterization of Activated Carbon from Agricultural Wastes in removal of Chromium ions from Wastewater (completed 2021).

(c) On-going PhD. students

- 1 Sifuna Douglas Bukhebi, PhD Chemistry, Jaramogi Oginga Odinga University of Science and Technology. Working Title: Assessment of Acaricide Residues in Trans Nzoia County and Mechanism of their Adsorption by Zeolites.
- 2 Zedekiah Odira, PhD Environmental Sciences, Masinde Muliro University of Science and Technology, MMUST. Working Title: Environmental and Human Health Indicators of Chemical Pollution from Large Scale Farming and Industries in Kenya (ongoing).

- 3 Adongo Stephen Odonde, PhD Chemistry, Jaramogi Oginga Odinga University of Science and Technology. Working Title: Green Synthesis of Nanoparticles using Herbal Plant, *Ageratum Conyzoides* and their Efficacy in Hemostasis (ongoing).
- 4 Zablon Otieno, PhD Chemistry, Jaramogi Oginga Odinga University of Science and Technology. Working Title: Phytochemical Analysis of Ripe Edible Wild Fruits Growing in Kisumu County, Kenya (ongoing).

(d) On-going M.Sc. students

- 1 Timothy Manda, MSc Physics, Jaramogi Oginga Odinga University of Science and Technology. Working title: Thermodynamics and kinetics of selected persistent organic pollutants adsorption on zeolites (ongoing).
- 2 Tiema Cleopas, MSc Chemistry, Jaramogi Oginga Odinga University of Science and Technology (ongoing)
- 3 Ronoh Doreen Jeruto, MSc food science, Jaramogi Oginga Odinga University of Science and Technology, Title: Mulberry Silkworm (*Bombyx Mori*) Pupae Extract as a Substitute for Synthetic Antioxidants in Vegetable Cooking Oils.
- 4 Loreen Otieno, MSc Physics, Jaramogi Oginga Odinga University of Science and Technology Working title: Moringa Oleifera Oil Extract as a Substitute for Synthetic Antioxidants in Vegetable Cooking Oils (ongoing).
- 5 Haakata Takudzwa, MSc food science, Jaramogi Oginga Odinga University of Science and Technology, Title: Assessment Evaluation of Amides and Amines in Armoured (*A. Discoidalis*) Crickets from Zimbabwe.

Memberships in panels, examination and review activities

- 1 2018 – Date: Chair person of the intellectual Committee of Jaramogi Oginga Odinga University of Science and Technology.
- 2 2018 – Date: Secretary General for Kenya Chemical Society, Western Chapter
- 3 2016 – 2021: Examination officer for the department of Physical Sciences, Jaramogi Oginga Odinga University of Science and Technology
- 4 2016 - 2018: Member, Africa Task Force for the Alexander von Humboldt Group Linkage programme between Germany/Kenya and China on the project “Exposomics of Persistent Organic Pollutants (PCBs, OCPs, MCCPs and SCCPs) and Polycyclic Aromatic Hydrocarbons (PAHs) in Lake Victoria (Africa) and Three Georges Reservoir (China)”.

Reviews

Peer reviewer for 4 international journals: Chemosphere, Environmental Pollution, Materials Science, Environmental Research, and Science of the Total Environment.

Course development

2017 to 2019: I developed five (5) programs for the department of Physical Sciences, Jaramogi Oginga Odinga University of Science and Technology, that are currently at various stages as indicated below:

- 1 Bachelor of Science in Chemical Engineering (at Senate);

- 2 Bachelor of Science in Petroleum Chemistry (at school level);
- 3 Bachelor of Science in Analytical Chemistry (School level);
- 4 Master of Science in Analytical Chemistry (School level) and
- 5 Doctor of Philosophy in Analytical Chemistry (School level).

Charity (Donations)

1. Donated my research Masters (2010) and PhD (2015) theses to Jaramogi Oginga Odinga University of Science and Technology Library.
2. Donated over 500 Chemistry e-books to Jaramogi Oginga Odinga University of Science and Technology library.

Community Service

1. The patron of Kedohi Primary School, (an alumni), where I help to solicit funds to drive their academic agenda as well as giving them moral support. In the first term Of 2018, I fully funded their strategic plan and also made a donation of 20,000 towards a water tank.
2. The Patron of Esivalu village Women Group where we are involved in various community projects including afforestation of Maragoli hills and supplying drinking water to members.

Referees

1. Prof. Philip Okinda Owuor: Maseno University Kenya; Mobile: +254 722 789 005; E mail: owuorpo@africaonline.co.ke
2. Prof. Joseph Owuor Lalah: Technical University of Kenya; Mobile: +254 723 521 644; Email: lalahjoseph@yahoo.com
3. Prof. Karl-Warner Schramm: Helmholtz Zentrum Muenchen, German, National Research Centre for Environmental Health (GmbH), Molecular EXposomics (MEX), Ingolstaedter Landstrasse 1, Neuherberg, Munich, Germany. E mail: schramm@helmholtz-muenchen.de Mobile: +498931873147