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## Curriculum Vitae



**KIGOZI MOSES**

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### Motivation:

Share and acquire knowledge and talents to the fullest. A person who is committed, innovative, focused on getting things done, has great people and communication skills, is punctual, and is adaptable.

### Education and Training

- ✘ **Postdoctoral Research** at International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) Hyderabad, India, from June to November 2022.
- ✘ **PhD in Materials Science and Engineering**, African University of Science and Technology, - Abuja, Nigeria, June 2018 to January 2021.
- ✘ **Research fellow** (Visiting Scholar) at International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) Hyderabad, India, from September 2019 to March 2020.
- ✘ **MSc in Chemistry** (Analytical/Environmental), Makerere University, July 2011-October 2014.
- ✘ **ITP Food Safety and Quality assurance**, University of Gent, 9<sup>th</sup> September to 17<sup>th</sup> December 2013
- ✘ **Bachelor's degree in Science Technology Chemistry**, Kyambogo University, September 2003 – June 2006.
- ✘ **Atomic Force Data processing**, LCSM & FM, LM & SM, sample preparation, TEM, SEM, Raman, and XRD spectroscopy by East Africa – Microscopy 2021 workshop 24<sup>th</sup> to 27<sup>th</sup> May 2021.
- ✘ Make better data-based decisions with statistical modelling techniques-JMP, Chemistry World, Royal Society of Chemistry 11<sup>th</sup> -13<sup>th</sup> October 2022.
- ✘ Introduction to ISO/TS 21357 for mean particle sizing by static multiple light scattering (SMLS), Formulation Scientific March 17<sup>th</sup>, 2022.
- ✘ **GC-MS Training**: A hands-on approach by Royal Society of Chemistry at Jomo Kenyatta University of Agriculture and Technology Kenya -28/08 to 1<sup>st</sup>/09/2017
- ✘ Teacher training content and **Pedagogy for Chemistry**, August 2018 by New Jersey Center for teaching and learning
- ✘ International summer training June 2015, “Fate and effect of agrochemicals in the environment” at Makerere University
- ✘ Business and entrepreneurship skills for researchers and innovators 2015 (UNCST) training
- ✘ Method Validation and Measurement Uncertainties UNBS 2011
- ✘ Effective Report Writing by British Council Uganda (24<sup>th</sup> -25<sup>th</sup> April 2008)
- ✘ Leading Business Project by British Council Uganda (27<sup>th</sup> -29<sup>th</sup> February 2008)

***Kigozi Moses (PhD) CV***

- ✗ Interaction Leadership by British Council Uganda (24<sup>th</sup> – 26<sup>th</sup> September 2007)

### Work experience.

- ✗ **Lecturer** in Department of Chemistry, Faculty of Science and Education, Busitema University from June 2022 to date
- ✗ **Chief Technician** in the Department of Chemistry, Faculty of Science and Education, Busitema University from February 2010 to 2021.
- ✗ **Part-time lecturer** with Islamic University in Uganda, Main campus and Kabojja campus in Department of Chemistry and Biochemistry from August 2016 to June 2018
- ✗ **Visiting Lecturer** at Marian University College Tanzania, Under the Inter-University Council of East Africa exchange program from November 2015 to February 2016
- ✗ **Quality Controller with** MOVIT Products limited From May 2009 to January 2010, in charge of quality standards for the cosmetics products and materials
- ✗ **Production Chemist/Supervisor** with Rene Pharmaceutical industry Kampala in the production and Quality control department from August 2007 to December 2009
- ✗ **Project Manager /Associate** with Africa Knowledge Transfer Partnership Program for Lake Katwe salt purification project in Kasese under JDG Africa limited with Mbarara University of Science and Technology in corroboration with British Council from July 2007 to March 2009
- ✗ **Chemist** with Kampala Pharmaceutical Industries, June 2006 to July 2007 in Quality Control and Quality Assurance department

### Projects.

- ✗ **Principal Investigator** - Green Synthesis of Graphene nano-dots and carbon-based nanomaterials from biomass as electrodes for supercapacitors and batteries energy storage application. September 2022 to August 2023. BURIF 2022
- ✗ **Project member** -Pulp and paper manufacture from agricultural residues November 2016 to December 2018
- ✗ **Project Leader-** Plastic waste recycling into liquid fuel and carbon nanomaterials for energy storage
- ✗ **Project Manager/ AKTP Associate** – lake Katwe salt purification and iodization project under AKTP British Council Uganda program.

### Membership and professional societies

- ✗ Associate Member of the Royal Society of Chemistry (669887)
- ✗ African Materials Research Society, AUST Chapter

### Research Interests

- ✗ Carbon-based materials for energy storage
- ✗ Fabrication and assembly of batteries and supercapacitors
- ✗ Thin films and nanomaterials for water, air, and oil applications
- ✗ Biomaterials and nanoparticles for drug delivery
- ✗ New materials characterization and applications
- ✗ DFT simulation and modelling energy storage materials
- ✗ Food safety, quality assurance, and risk assessments
- ✗ Science and Innovation projects

### Publication and research

1. **Kigozi, M.**, Kasozi, G. N., Mohite, S. B., Zamisa, S., Karpoormath, R., Kirabira, J. B., Tebandeke, E., Baptist, J., & Emmanuel, K. &. (2023). Non-emission hydrothermal low-temperature synthesis of carbon nanomaterials from poly (ethylene terephthalate) plastic waste for excellent supercapacitor applications. *Green Chemistry Letters and Reviews*, 16(1), 1–19. <https://doi.org/10.1080/17518253.2023.2173025>
2. **Moses, K.**, Richard K, K., Kingsley, O., Ravi, K., Omar LM, K., Balaji, P., Abdulhakeem, B., Gabriel N, K., Pawan Kumar, J., John Baptist, K., Azikiwe Peter, O., & Nelson Y, D. (2023). Porous carbon derived from Zea mays cobs as excellent electrodes for supercapacitor applications. *Open Journal of Analytical and Bioanalytical Chemistry*, 7(1), 001–010. <https://doi.org/10.17352/OJABC.000028>
3. **Kigozi, Moses**, Blessing N. Ezealigo, Gabriel N. Kasozi, Emmanuel Tebandeke, and John Baptist Kirabira. 2022. “The Science of High-Energy Graphene Oxide–Based Materials for Hybrid Energy Storage Applications.” Pp. 151–92 in *Graphene Oxide in Enhancing Energy Storage Devices*. Boca Raton: CRC Press, Doi: [10.1201/9781003215196-11](https://doi.org/10.1201/9781003215196-11).
4. Bello, Abdulhakeem, Ridwan A. Ahmed, Richard. K. Koech, Kingsley Orisekeh, Dahiru M. Sanni, **Moses Kigozi**, Vitalis Anye, Oluwaseun K. Oyewole, and Winston O. Soboyejo. 2022. “The Mechanical Properties of Batteries and Supercapacitors.” Reference Module in Materials Science and Materials Engineering. doi: [10.1016/B978-0-12-822944-6.00050-5](https://doi.org/10.1016/B978-0-12-822944-6.00050-5).
5. Baba, S. B., **Kigozi, M.**, & Katari, N. K. (2022). Applications of Nanotechnology and Nanodevices for the Early-Stage Detection of Cancer Cells. *Smart Nanodevices for Point-of-Care Applications*, 209–220. <https://doi.org/10.1201/9781003157823-17>.
6. **Moses Kigozi**, Blessing N Ezealigo, Azikiwe Peter Onwualu, Nelson Y Dzade (2021). Hydrothermal synthesis of metal oxide composite cathode materials for high energy application. In: Ezema F.i., Lokhhande C.D., (eds) *Chemically Deposited Nanocrystalline Metal Oxide Thin Films*. Springer, Chem, Pp 489-508. [https://doi.org/10.1007/978-3-030-68462-4\\_19](https://doi.org/10.1007/978-3-030-68462-4_19).
7. **Kigozi, M.**, Kali, R., Bello, A., Padya, B., Kalu-uka, G. M., Wasswa, J., Jain, P. K., Onwualu, P. A., & Dzade, N. Y. (2020). Modified Activation Process for Supercapacitor Electrode Materials from African Maize Cob. *Materials*, 13(5412), 1–21. <https://doi.org/10.3390/ma13235412>
8. **Kigozi, M.**, Koech, R. K., Kingsley, O., Ojeaga, I., Tebandeke, E., Kasozi, G., & Onwualu, P. A. (2020). Synthesis and characterization of graphene oxide from locally mined graphite flakes and its supercapacitor applications \_ Elsevier Enhanced Reader.pdf. *Results in Materials*, 100113. <https://doi.org/10.1016/j.rinma.2020.100113>
9. Otoijamun, I.; **Kigozi, M.**; Abdulraman, S.O.; Adetunji, A.R.; Onwualu, A.P. (2021), Fostering the Sustainability of Artisanal and Small-Scale Mining (ASM) of Barite in Nasarawa State, Nigeria. *Sustainability* 13, 5917. <https://doi.org/10.3390/su13115917>
10. Otoijamun, I., **Kigozi, M.**, Adetunji, A. R., & Onwualu, P. A. (2021). Characterization and Suitability of Nigerian Barites for Different Industrial Applications. *MDPI Minerals*, 71(360). <https://doi.org/10.3390/min11040360>
11. Koech, R. K., Ichwani, R., Oyewole, D. O., **Kigozi, M.**, Amune, D., Sanni, D. M., Adeniji, S. A., Oyewole, O. K., Bello, A., Ntsoenzok, E., & Soboyejo, W. O. (2021). Tin Oxide Modified Titanium Dioxide as Electron Transport Layer in Formamidinium-Rich Perovskite Solar Cells. *Energies* 2021, Vol. 14, Page 7870, 14(23), 7870. <https://doi.org/10.3390/EN14237870>
12. Kalu-Uka, G. M., Kumar, S., Kalu-Uka, A. C., Vikram, S., Okorafor, O. O., **Kigozi, M.**, Ihekwe, G. O., & Onwualu, A. P. (2021). Prospects for biodiesel production from *Macrotermes nigeriensis*: Process optimization and characterization of biodiesel properties. *Biomass and Bioenergy*, 146(February), 105980. <https://doi.org/10.1016/j.biombioe.2021.105980>

13. Orisekeh, K., Singh, B., Olanrewaju, Y., **Kigozi, M.**, Ihekwe, G., Umar, S., Anye, V., Bello, A., Parida, S., & Soboyejo, W. O. (2020). Processing of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Nanoparticles on Activated Carbon Cloth as Binder-Free Electrode Material for Supercapacitor Energy Storage. *Journal of Energy Storage*, July, 102042. <https://doi.org/10.1016/j.est.2020.102042>
14. Bello, A., Sanni, D. M., Adeniji, S. A., Anye, V., Orisekeh, K., **Kigozi, M.**, & Koech, R. (2020). Combustion synthesis of battery-type positive electrodes for robust aqueous hybrid supercapacitor. *Journal of Energy Storage*, 27, 101160. <https://doi.org/10.1016/j.est.2019.101160>
15. Koech, R. K., **Kigozi, M.**, Bello, A., Onwualu, P. A., & Soboyejo, W. O. (2019). Recent advances in solar energy harvesting materials with particular emphasis on photovoltaic materials. *IEEE PES/IAS PowerAfrica Conference: Power Economics and Energy Innovation in Africa, PowerAfrica 2019*, 627–632. <https://doi.org/10.1109/PowerAfrica.2019.8928859>
16. **Moses Kigozi** (2019), SEM-EDX characterization of Graphene oxide from locally mined graphite flakes, conference paper “1<sup>st</sup> US-Africa forum on Nanotechnology convergence 08/2019 in South Africa
17. **Kigozi Moses**, John Wasswa, Muhammad Ntale, and Peter Nkedi-Kizza (2016). Characterization and hydrocarbon identification of liquid fuel from mixed plastic waste plastics at different time intervals”. ISSN 2229-5515 [www.ijser.org/researchpaper/Characterization-and-Hydrocarbon-Identification-of-Liquid-Fuel-from-Mixed-Waste-Plastics-at-Different-Heating-Time-Intervals.pdf](http://www.ijser.org/researchpaper/Characterization-and-Hydrocarbon-Identification-of-Liquid-Fuel-from-Mixed-Waste-Plastics-at-Different-Heating-Time-Intervals.pdf)
18. **Moses Kigozi**, (2016). Hazard identification of organo-chlorine pesticide residues, case study of tomatoes and carrots from selected markets in the central Uganda”. Vol 4, issue 8, ISSN 2320-9178. [www.academia.edu/37203592/hazard\\_identification\\_of\\_organochlorine\\_pesticide\\_residues\\_case\\_study\\_of\\_tomatoes\\_and\\_carrots\\_from\\_selected\\_markets\\_in\\_the\\_central\\_uganda](http://www.academia.edu/37203592/hazard_identification_of_organochlorine_pesticide_residues_case_study_of_tomatoes_and_carrots_from_selected_markets_in_the_central_uganda)
19. **Moses Kigozi** (2015). Production and characterization of liquid fuel from mixed plastic wastes by catalytic pyrolysis, Makerere University 2014(MSc thesis) DOI: 10.13140/RG.2.2.24471.11682.
20. **Moses Kigozi** (2015). Quantitative risk assessment of organo-chlorine pesticide residues in Tomatoes and Carrots in central markets in Uganda. ITP food safety, faculty of Bioengineering Ghent University
21. **Moses Kigozi** (2008). Chemical composition analysis of the three salt grades from Lake Katwe, Kasese District western Uganda. The 4<sup>th</sup> Science Symposium of Mbarara University of Science and Technology.
22. **Moses Kigozi** (2008). Purification and iodization of Lake Katwe salt, Kasese District, western Uganda, Science Symposium at Mbarara University of Science and Technology.

## REFERENCES

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