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EDUCATION

Researcher and Lecturer at the department of Physical Sciences Machakos University College (MUC), a Constituent College of Kenyatta University. **PhD** from the Department of Chemistry, State University of New York (SUNY) at Binghamton. Dissertation Title: “**Naturally Derived Flavonoids and Nanomembranes for Environmental Remediation and Sensing**”. I have a wide breadth of experience with the application of various analytical instruments including LC-MS, GC-MS, AAS, ICP-MS, SEM, TEM and XRD for environmental analysis and monitoring among others. Well conversant with major extraction and separation techniques. I have carried out extensive research on effects and remediation of hexavalent chromium compounds, my current research interests include in general; Nanoremediation for Environmental Monitoring; Waste water treatment and Management; Environmental toxicology and pollution; and the general application of Green Chemistry in solving day to environmental problems. Specifically, I am currently working on:

- The development of a green sustainable remediation approaches for heavy metals and non-conventional pharmaceuticals pollutants, persistent organic pollutants

(POPs) i.e. Pesticides, PFCs, their speciation and remediation with the focus on the three major categories of environmental nanotechnology, namely remediation, nanometrology and re-usability.

- Nanoscale materials that offer new possibilities for the development of novel remediation and environmental monitoring technologies.

I obtained my **MSc** (Analytical Chemistry) and **BEd** Science from Jomo Kenyatta University of Agriculture & Technology (JKUAT) and Kenyatta University (KU) respectively. MSc research was on 'Biodegradation of Textile Dyes Using Selected Soil Microorganisms'.

SELECTED PUBLICATIONS:

1. Selly J-Kimosop, **Veronica A. Okello**, Zachary M. Getenga, Francis Orata, Victor O. Shikuku, Green Remediation of Carbamazepine from Water Using Novel Magnetic Iron Modified Carbonized Baggasse: Kinetics, Equilibrium and Mechanistic Studies, *Chemical Science International Journal*, 2017, Vol 8, Issue 3.
2. **Veronica Okello**, Environmental Detoxification Using Polyamic Acid Powder and Nanomembranes, **2017**. Manuscript Proceedings of the Exceed Swindon Expert Workshop "Sustainable Use of Water Resources" in Kisumu, Kenya, July 3-8, 2016. Pg 61-68.
3. Selly Kimosop, Zachary Getenga, Francis Orata, **Veronica Okello** and Cheruiyot J. K, Quantification of selected antibiotics and their discharge loads in wastewater treatment plants and hospital lagoons within lake Victoria basin, Kenya. Proceedings of the Exceed Swindon Expert Workshop "Sustainable Use of Water Resources" in Kisumu, Kenya, July 3-8, 2016. Pg 23-32.
4. Selly Kimosop, Zachary Getenga, Francis Orata and **Veronica Okello**, Residue Levels and Discharge Loads of Antibiotics in Wastewater Treatment Plants (WWTPs), Hospital Lagoons and Rivers within Lake Victoria Basin, Kenya, *Environmental Monitoring and Assessment*, **2016**;188(9):532. doi: 10.1007/s10661-016-5534-6.
5. Fred Sifuna, **Veronica Okello** and Francis Orata, Comparative studies in electrochemical degradation of sulfamethoxazole and diclofenac in water using various electrodes, *Journal of Environmental and Health, Part A*, **2016**, 51, 11, 954 – 961.
6. **Veronica A. Okello**, Michael T. Knipfing, Victor Bushlyar and Omowunmi A. Sadik*, Reactivity, characterization of reaction products and immobilization of lead in water and sediments using quercetin pentaphosphate, *Environ. Sci.: Processes Impacts*, **2016**, 18, 306.
7. **Veronica A. Okello**, Samuel Gass, Georgios Pyrgiotakis, Nian Du, Kimberly. Murdaugh, Boling Deng, Philip Demokritou* & Omowunmi A. Sadik*, Capture, Isolation and Electrochemical Detection of Industrially-relevant aerosol

- Nanoparticles using Poly(amic) acid, Phase inverted , Nanomembranes, *Journal of Hazardous Materials*, **2014**, 279, 365-374.
8. Naumih M Noah, **Veronica Okello**, Zhaoyong Sun and Omowunmi A. Sadik*, Nanoremediation of Cr (VI). An Instrumental Method Analysis Laboratory Experiment, *Journal of Chemical Education*, **2014**, 91, (2), 269-273.
 9. Samuel K. Mwilu, **Veronica A. Okello**, Seth Miller, Omowunmi A. Sadik* A Universal Substrate for Alkaline Phosphatase Based on Fluorescence, Absorbance and Electrochemical Techniques, *Analyst*, **2014**, 139, 5472-5481.
 10. Idris Yazgan, Nian Du, Robert Congdon, **Veronica A. Okello**, Omowunmi A. Sadik , *Biofunctionalized Poly (amic) Acid Membranes for Disinfection of Drinking Water*, *Journal of Membrane Science*, **2014**, **472:261-271**
 11. O. A. Sadik, N. Du, V. Kariuki, **V. Okello** and V. Bushlyar,. Current and Emerging Technologies for the Characterization of Nanomaterials, *ACS Sustainable Chem. Eng.*, **2014**, 2 (7), pp 1707–1716
 12. **Okello, V. A.**; Chong, J.; Zhou, A.; Doetschman, D. and *Sadik, O. A.; Cr(VI) Removal using Quercetin and Other Naturally-occurring Flavonoids, *Environmental Science and Technology*, **2012**, 46, 10743–10751
 13. **Okello, V. A.**; Du, N.; Deng, B. and *Sadik, O. A.; Environmental Applications of Poly(amic)- based Nanomaterials, *Journal of Environmental Monitoring*, **2011**, 13, 1236 – 1245.
 14. Kikandi, S. N.; **Okello, V. A.**; Wang, Q. and *Sadik, O. A.; Size- Exclusive Nanosensor for Quantitative Analysis of Fullerene C₆₀, *Environmental Science and Technology*, **2011**, 45, 5294 – 5294.
 15. Omole, M. A.; **Okello, V. A.**; Lee, V.; Zhou, L. and *Sadik, O. A.; Catalytic Reduction of Hexavalent Chromium using Flexible Nanostructured Poly(amic) Acid, *ACS Catalysis*, **2011**, 1, 139 – 146.

FUNDED RESEARCH PROJECTS

- Electrochemical degradation of Selected Pharmaceuticals in Wastewater Treatment Plants within Lake Victoria Region, Kenya.
- Degradation of Organophosphate Paraoxon using Zero-valent Iron Nanoparticles in Tropical Soils within Nzoia Drainage Basin, Kenya. Both projects are funded by NACOSTI

HONORS AND AWARDS

- 2017:** Chemical Security Training (CST) grant, USD 19,984
- 2017:** Chemical Security Improvement Grant (CSIG) grant, USD 15,299.34
- 2016:** *Seeding Labs Equipment Access 2016 Award, USD 170,690.28, Machakos University*
- 2013:** *Young Chemists Recognition at PITTCON Conference & Exposition held in Philadelphia, PA, March 17-22, 2013, Metrohm USA, Inc. Job offer at the City of Houston's Public Works & Engineering, Wastewater Operations in Texas. www2.binghamton.edu/chemistry/news/*
- 2013:** Best poster presentation award; Center for Advanced Sensors and Environmental Systems, 2nd Annual Workshop on Environmental Nanotechnology.
- 2012:** Sustainable Nanotechnology Organization (SNO) Student Award
- 2012:** Discussion leader at one of the prestigious Gordon Research Seminar (GRS) sessions on Green Chemistry.
- Travel grant to attend the Prestigious Gordon Research Conference and Seminar on Green Chemistry held in Renaissance Tuscany II Ciocco Resort, Lucca (Barga), Italy.
- 2012:** Graduate Student Award in Environmental Chemistry awarded by Division of Environmental Chemistry of the American Chemical Society.
- 2011:** Travel grant to attend the inaugural Gordon Research Conference on Environmental Nanotechnology held in Waterville Valley Resort.
- 2010-2012:** Summer Appointment awarded by the Research Foundation of New York.
- 2009:** Summer Teaching Fellowship, Chemistry Department, SUNY Binghamton.
- 2008-2013:** Graduate Assistant/Teaching Assistant (GA/TA) Fellowship.