



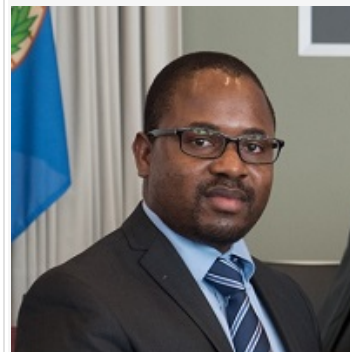
THE TECHNICAL UNIVERSITY OF KENYA

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School:	CHEMISTRY AND MATERIAL SCIENCE
Department:	INDUSTRIAL AND APPLIED CHEMISTRY
Current Designation:	Senior Lecturer, DEPARTMENT OF CHEMISTRY AND MATERIALS SCIENCE
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EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Philosophy (PhD)	Materials Science	University of Oxford(United Kingdom)	2012
Master of Engineering (M.Eng)	Advanced Materials	Kangwon National University Samcheok Campus(South Korea)	2007
Bachelor of Science (BSc)	Chemistry Major and Mathematics Minor	Kenyatta University(Kenya)	2004
O level/Equivalent	KENYA CERTIFICATE OF SECONDARY EDUCATION	LENANA HIGH SCHOOL(Kenya)	1998
KCPE/Equivalent	KENYA CERTIFICATE OF PRIMARY EDUCATION	BARODAR PRIMARY SCHOOL(Kenya)	1994

WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
1st October 2019 - To date	The Technical University of Kenya	Director of School - School of Chemistry and Material Science
15th March 2018 - to date	The Technical University of Kenya	Senior Lecturer
2013 - 2018	The Technical University of Kenya	Lecturer
2012 - 2013	Pwani University	Lecturer
2011 - 2012	University of Oxford	Research Assistant (Prof. Nicole Grobert)
2005 - 2007	Kangwon National University	Graduate Assistant

GENERAL STATEMENT ON RESEARCH AREAS

Material processing and characterization including, Ag and Fe nanoparticles; graphite/graphene composites, Carbon nanotube composites. Bone char preparation using Solar Concentrator. Fluoride remediation. Bio-degradable plastics fabrication.

CURRENT RESEARCH PROJECTS

Carbon nanotube polymer composites	Nano-composites
Green Synthesis of Ag and Fe Nanoparticles	Green Chemistry, Nano
Biodegradable plastics	Synthesis of biodegradable plastics and their composites

SELECTED PUBLICATIONS

TITLE	LINK TO PUBLICATION	YEAR
Aligned carbon nanotubes aluminoborosilicate glass composite by sol gel processing	View online	
Composite materials containing aligned nanotubes and the production thereof RI Todd, N Grobert, G Otieno US Patent App. 13/392,124	View online	
Conductive graphite/polyurethane composite films using amphiphilic reactive dispersant: Synthesis and characterization G Otieno, JY Kim Journal of Industrial and Engineering Chemistry 14 (2), 187-193	View online	2008
Effects of solution chemistry on dielectric barrier atmospheric non-thermal plasma for operative degradation of antiretroviral drug nevirapine	View online	2024
NANOPARTICLE-BASED formulation of dihydroartemisinin-lumefantrine duo-drugs: Preclinical Evaluation and enhanced antimalarial efficacy in a mouse model	View online	2024
Optimization of Methylene Blue Dye Adsorption onto Coconut Husk Cellulose Using Response Surface Methodology: Adsorption Kinetics, Isotherms and Reusability Studies	View online	2024
Characterization of Eggshells Nanocatalyst: Synthesized by Bottom-Up Technology	View online	2022
Stiffness, strength and interwall sliding in aligned and continuous multi-walled carbon nanotube/glass composite microcantilevers	View online	2015
Processing and properties of aligned multi-walled carbon nanotube/aluminoborosilicate glass composites made by sol-gel processing	View online	2010
The Engine Performance, combustion, and Emission of Yellow Oleander (Thevetia peruviana) Biodiesel and Blends	View online	2022
Green synthesis of silver nanoparticles using Euphorbia tirucalli and Catha edulis extract	View online	2017
EXPLORING CORRELATION BETWEEN THE SOCIO-ECONOMIC STATUS OF A COMMUNITY AND MICROPLASTIC LOADING IN WASTEWATER EFFLUENT IN NAIROBI, KENYA	View online	2023
Green synthesis of silver nanoparticles using Euphorbia tirucalli and Catha edulis extract	View online	2017
Thermal and electrical properties of aluminoborosilicate glass-ceramics containing multiwalled carbon nanotubes A Mukhopadhyay, G Otieno, BTT Chu, A Wallwork, MLH Green, RI Todd Scripta Materialia 65 (5), 408-411	View online	2011
Optimization and thermodynamics of the extraction of yellow oleander seed oil using soxhlet extractor	View online	2017
Fabrication of Metal Oxide-Biopolymer Nanocomposite for Water Defluoridation	View online	2021
Life Cycle Analysis of Yellow Oleander Biodiesel Production in Kenya	View online	2022
Chemical Security in Kenya: Efforts, Challenges, and Opportunities in Academic Institutions and the Chemical Industry	View online	2021
Evaluation of chemistry performance in secondary schools in nomadic pastoralist communities of Kajiado and Narok counties in Kenya	View online	2021
Examining Options for Mitigating Microplastic Pollution in the Nairobi River Basin, Kenya.	View online	2023

NAME	PROJECT TITLE	PERIOD
Masime Jeremiah	Feasibility Study for Yellow Oleander Biodiesel Production Using Eggshell Derived Nanocatalyst Synthesized by Bottom-up Technique (PhD)	Graduated 2023
Pesila Odera - PhD Student	Formulation and Pre-Clinical Testing Of Novel Nanoparticle-Based Combination Antimalarial Drugs	3 years
Kimei Mwanza - PhD Student	Synthesis of Ag nanoparticles (PhD)	4 years
Stephen Situma - PhD Student	Carbon Nanotube/Polymer Composite (PhD)	4 years
Claudia Bess - PhD Student	Characterisation and Modelling of Microplastic Pollution in Selected Communities in Nairobi	4 Years
Daisy Nyawira - PhD Student	Solar-driven electrocatalytic reduction of hexavalent chromium in wastewaters over an Iron-copper catalyst.	2 Years
Nancy Ochiba - PhD Student	Production of Sustainable Synthetic Fuel for Cooking Via Electrocatalytic Reduction of Carbon dioxide Using Solar Energy.	2 Years
Erick Mobegi - PhD	Synthesis and Characterization of Metal Oxide Biopolymer Nanocomposite: Kinetics and Equilibrium Studies on Adsorption of Fluoride and Arsenate in Water	Graduated 2023

COURSES TAUGHT

NAME	DESCRIPTION	PERIOD
Material and Energy Balance	Mass and energy balances on different systems	2013 - TO-DATE
Nanochemistry	Techniques of synthesis of nano-materials with a bias to wet chemistry	2013 - TO-DATE
Nanotechnology	Basic introductory/overview of different aspects of nanotechnology with emphasis on emerging technologies	2013 - TO-DATE
Materials Science	Mechanical, electrical and thermal properties of materials	2014 - xxxx