



# THE TECHNICAL UNIVERSITY OF KENYA

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NAME: DR CLEMENT ANDERE MIRUKA

Faculty:	Applied Sciences and Technology
School:	CHEMISTRY AND MATERIAL SCIENCE
Department:	INDUSTRIAL AND APPLIED CHEMISTRY
Current Designation:	Tutorial Fellow, GEOCHEMISTRY AND ENVIRONMENTAL CHEMISTRY (DGECE)
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Consultation Hours:	800AM-5.00PM



## EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Engineering (Dr-Ing)	ENVIRONMENTAL SCIENCE & ENGINEERING	DONGHUA UNIVERSITY (China)	2024
Masters of Science (M.Sc.)	ENVIRONMENTAL CHEMISTRY	UNIVERSITY OF NAIROBI(Kenya)	2016
Bachelor of Science (BSc)	CHEMISTRY	MOI UNIVERSITY (Kenya)	2011
Certificate	INDUSTRIAL EFFLUENT TREATMENT	UNESCO-IHE(The Netherlands)	2017
O level/Equivalent	KENYA CERTIFICATE OF SECONDARY EDUCATION	MPEKETONI SECONDARY SCHOOL(Kenya)	2005
KCPE/Equivalent	KENYA CERTIFICATE OF PRIMARY EDUCATION	KAGAI PRIMARY SCHOOL(Kenya)	2000

## WORK EXPERIENCE

<b>PERIOD</b>	<b>INSTITUTION</b>	<b>POSITION</b>
2018 - TO DATE	THE TECHNICAL UNIVERSITY OF KENYA	TUTORIAL FELLOW
2015 - 2017	THE TECHNICAL UNIVERSITY OF KENYA	GRADUATE ASSISTANT
2013 - 2014	SYNER-MED PHARMACEUTICALS	MEDICAL REPRESENTATIVE
2013 - 2013	WOODVALE PHARMACY LTD	MEDICAL REPRESENTATIVE
2012 - 2012	SAI PHARMACEUTICALS	MEDICAL REPRESENTATIVE

#### SELECTED PUBLICATIONS

TITLE	LINK TO PUBLICATION	YEAR
Effects of solution chemistry on dielectric barrier atmospheric non-thermal plasma for operative degradation of antiretroviral drug nevirapine	<a href="#">View online</a>	2024
Synergistic coupling of plasma with microbubbles for enhancing short-chain fatty acids production during sludge anaerobic fermentation: Mechanistic insights into reactive specie motivation and microbial community dynamics	<a href="#">View online</a>	2024
Degradation of glucocorticoids in aqueous solution by dielectric barrier discharge: Kinetics, mechanisms, and degradation pathways	<a href="#">View online</a>	2019
Degradation of dichloroacetic acid in a novel corona discharge reactor integrated with microbubbles generation	<a href="#">View online</a>	2021
Degradation of glucocorticoids in water by a synergistic system of peroxymonosulfate, microbubble and dielectric barrier discharges	<a href="#">View online</a>	2021
Effectiveness of chelating agent-assisted Fenton-like processes on remediation of glucocorticoid contaminated soil using chemical and biological assessment: performance comparison of CaO <sub>2</sub> and H <sub>2</sub> O <sub>2</sub>	<a href="#">View online</a>	2021
Degradation of glucocorticoids in water by dielectric barrier discharge and dielectric barrier discharge combined with calcium peroxide: performance comparison and synergistic effects	<a href="#">View online</a>	2019
Motivation of reactive oxygen and nitrogen species by a novel non-thermal plasma coupled with calcium peroxide system for synergistic removal of sulfamethoxazole in waste activated sludge	<a href="#">View online</a>	2022
Motivation of reactive oxygen and nitrogen species by a novel non-thermal plasma coupled with calcium peroxide system for synergistic removal of sulfamethoxazole in waste activated sludge	<a href="#">View online</a>	2022
Synergistic effects and mechanisms of plasma coupled with peracetic acid in enhancing short-chain fatty acid production from sludge: Motivation of reactive species and metabolic tuning of microbial communities	<a href="#">View online</a>	2023
Optimization of clobetasol propionate removal by calcium peroxide using the response surface methodology	<a href="#">View online</a>	2019
Degradation of glucocorticoids in aqueous solution by dielectric barrier discharge: Kinetics, mechanisms, and degradation pathways	<a href="#">View online</a>	2019
Reactive Nitrogen Species Generated by Gas-Liquid Dielectric Barrier Discharge for Efficient Degradation of Perfluorooctanoic Acid from Water	<a href="#">View online</a>	2021
Synergistic improvement of short-chain fatty acid production from waste activated sludge via anaerobic fermentation by combined plasma-calcium peroxide process	<a href="#">View online</a>	2022
Enhanced degradation of tetracycline by TiO <sub>2</sub> @MXene with peroxydisulfate under visible light irradiation	<a href="#">View online</a>	2024
Efficacy and mechanistic insights into dielectric barrier discharge plasma degradation of antiretroviral drug efavirenz	<a href="#">View online</a>	2024
Occurrences of Glucocorticoids in Aquatic Environment and Their Removal during Wastewater Treatment	<a href="#">View online</a>	2023
Ionic liquid coupled plasma promotes acetic acid production during anaerobic fermentation of waste activated sludge: Breaking the restrictions of low bioavailable substrates and altering the metabolic activities of anaerobes	<a href="#">View online</a>	2024
Synergistic performance and mechanisms of plasma and peracetic acid for antibiotic degradation in water	<a href="#">View online</a>	2024

POSTGRADUATE STUDENTS SUPERVISION

**NAME PROJECT TITLE PERIOD**

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PROFESSIONAL AFFILIATIONS AND SOCIETIES

**TITLE INSTITUTION**

MEMBER	KENYA CHEMICAL SOCIETY
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