

# THE TECHNICAL UNIVERSITY OF KENYA

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#### NAME: MR 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 (DGEC) |
| Office Telephone:    | 020-343672   |
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| Consultation Hours:  | 800AM-5.00PM   |



#### EDUCATION

| LEVEL                      | QUALIFICATION NAME                     | INSTITUTION                  | YEAR |
|----------------------------|--|------------------------------|------|
| Masters of Science (M.Sc.) | Environmental Chemistry                | University Of Nairobi(Kenya) | 2015 |
| Bachelor of Science (BSc)  | CHEMISTRY                              | MOI UNIVERSITY(Kenya)        | 2011 |
| Certificate                | INDUSTRIAL EFFLUENT TREATMENT          | UNESCO-IHE(The Netherlands)  | 2017 |
| KCPE/Equivalent            | KENYA CERTIFICATE OF PRIMARY EDUCATION | KAGAI PRIMARY SCHOOL(Kenya)  | 2000 |

### WORK EXPERIENCE

| PERIOD         | INSTITUTION                       | POSITION               |
|----------------|-----------------------------------|------------------------|
| 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

| ΓΙΤLE   | LINK TO<br>PUBLICATION | YEAR |
|---|------------------------|------|
| 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 | View online            | 2024 |
| Effects of solution chemistry on dielectric barrier atmospheric non-thermal plasma for operative degradation of antiretroviral drug nevirapine  | View online            | 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 | View online            | 2024 |
| Degradation of glucocorticoids in aqueous solution by dielectric barrier discharge:Kinetics,mechanisms,and degradation pathways   | View online            | 2019 |
| Degradation of dichloroacetic acid in a novel corona discharge reactor integrated with microbubbles generation  | View online            | 2021 |
| Degradation of glucocorticoids in water by a synergistic system of peroxymonosulfate, microbubble and dielectric barrier discharges   | View online            | 2021 |
| Effectiveness of chelating agent-assisted Fentonlike processes on remediation of glucocorticoid contaminated soil using chemical and biological assessment: performance comparison of CaO2 and H2O2                           | View online            | 2021 |
| Degradation of glucocorticoids in water by dielectric barrier discharge and dielectric barrier discharge combined with calcium peroxide: performance comparison and synergistic effects                                       | View online            | 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                                   | View online            | 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                                   | View online            | 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                                   | View online            | 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             | View online            | 2023 |
| Optimization of clobetasol propionate removal by calcium peroxide using the response surface methodology  | View online            | 2019 |
| Degradation of glucocorticoids in aqueous solution by dielectric barrier discharge:Kinetics,mechanisms,and degradation pathways   | View online            | 2019 |
| Reactive Nitrogen Species Generated by Gas-Liquid Dielectric Barrier Discharge for<br>Efficient Degradation of Perfluorooctanoic Acid from Water  | View online            | 2021 |
| Synergistic improvement of short-chain fatty acid production from waste activated sludge via anaerobic fermentation by combined plasma-calcium peroxide process   | <u>View online</u>     | 2022 |

### NAME PROJECT TITLE PERIOD

| 0 | 0 | 0 |
|---|---|---|
| 0 | 0 | 0 |

## PROFESSIONAL AFFILIATIONS AND SOCIETIES

#### TITLE INSTITUTION

MEMBER KENYA CHEMICAL SOCIETY