



THE TECHNICAL UNIVERSITY OF KENYA

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Faculty:	Applied Sciences and Technology
School:	CHEMISTRY AND MATERIAL SCIENCE
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EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Philosophy (PhD)	CHEMISTRY	UNIVERSITY OF THE WESTERN CAPE(South Africa)	2011
Masters of Science (M.Sc.)	CHEMISTRY	UNIVERSITY OF THE WESTERN CAPE(South Africa)	2009
Bachelor of Education (B.Ed)	MATHEMATICS AND CHEMISTRY	KENYATTA UNIVERSITY(Kenya)	2005
KCPE/Equivalent	KENYA CERTIFICATE OF PRIMARY EDUCATION	KALIINI PRIMARY SCHOOL(Kenya)	1995

WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
2016 - TO DATE	THE TECHNICAL UNIVERSITY OF KENYA	SENIOR LECTURER
2012 - 2015	KENYATTA UNIVERSITY	LECTURER
2012 - 2012	University of the Western Cape	Lecturer
2009 - 2011	University of the Western Cape	Instructor/Administrator of Chemistry practicals
2007 - 2008	University of the Western Cape	Tutor & Demonstrator of Chemistry practicals
2005 - 2007	Kalulini Boys High School	Teacher of Mathematics and Chemistry

SELECTED PUBLICATIONS

TITLE	LINK TO PUBLICATION	YEAR
Current Trends of Nanobiosensors for Point-of-Care Diagnostics	View online	2019
A silver nanoparticles-poly (8-anilino-1-naphthalene sulphonic acid) bioelectrochemical sensor system for the analytical determination of ethambutol, In V. Rajendra, B. Hillbrands, P. Prabu and K.E. Geckeler (eds.): Biomedical Applications of Nanostructured Materials, Macmillan Publishers India Limited, 2010, Pages 269-274.	View online	2011
Nanocomposite materials for water purification: synthesis, characterization, and applications, In Ashutosh Kumar Shukla (eds.): Spectroscopy and Machine Learning for Water Quality Analysis, Institute of Physics publishers, Ewing Christian College, University of Allahabad, Prayagraj, India, chapter 4 pages 1 - 40.	View online	2021
Nanobiosensors and their Application in Medical Imaging, In Ashutosh Kumar Shukla: Medical Imaging Methods Theory and Applications, CRC Press, Boca Raton, chapter 6 eBook ISBN:9781003112068	View online	2021
Nanosensor arrays: Innovative approaches for medical diagnosis, In Suresh Kaushik, Vijay Soni, Efstathia Skotti: Nanosensors for Futuristic Smart and Intelligent Healthcare Systems CRC Press, Boca Raton, chapter 16 eBook ISBN: 9781003093534	View online	2022
Naumih M Noah and Peter M Ndangili (2023). Polymeric nanosystems for neurological therapeutics, in Md Saquib Hasnain, Amit Kumar Nayak, Tejraj M. Aminabhavi, Polymeric Nanosystems: Theranostic Nanosystems, academic press (an imprint of Elsevier)	View online	2023
Modulation of the interfacial electrochemistry of surfactant-functionalised polypyrrole chemical sensor systems	View online	2011
Gallium-Induced Perturbation of Zinc Selenide Quantum Dots Electronics	View online	2017
Optoelectronics of stoichiometrically controlled palladium telluride quantum dots	View online	2016
Electronics of Conjugated Polymers (I): Polyaniline (A Review Paper	View online	2012
3-Mercaptopropionic Acid Capped Ga ₂ Se ₃ nanocrystal-CYP3A4 Biosensor for the Determination of 17-Alpha-Ethinyl Estradiol in Water	View online	2012
3-Mercaptopropionic acid capped ZnSe quantum dot-cytochrome P450 3A4 enzyme biotransducer for 17 beta-estradiol	View online	2011
Ferrocenium hexafluorophosphateinduced nanofibrillarity of polyanilinepolyvinyl sulphonate electropolymer andapplication in an amperometric enzyme biosenso	View online	2010
Spectroelectrochemical Dynamics of Dendritic Poly (Propylene -Estradiol Biosensor, imine)-Polythiophene Star Copolymer Aptameric 17β-Estradiol Biosensor	View online	2011
A silver Nanoparticle/Poly (8-Anilino-1-Naphthalene Sulphonic Acid) Bioelectrochemical Biosensor System for the Analytical Determination of Ethambutol	View online	2011
Determination of Anthracene on Ag-Au Alloy Nanoparticles/Overoxidized-Polypyrrole Composite Modified Glassy Carbon Electrodes	View online	2010
Polyester Sulphonic Acid Interstitial Nanocomposite Platform for Peroxide Biosensor	View online	2009
Functionalisation of polyaniline nanomaterials for amperometric biosensing, Nanostructured Materials for Electrochemical Biosensors,	View online	2009
Ultrasensitive immunosensor for multiplex detection of cancer biomarkers carcinoembryonic antigen (CEA) and yamaguchi sarcoma viral oncogene homolog 1 (YES1) based on eco-friendly synthesized gold nanoparticles	View online	2024
Development Of Electrochemical Immunosensor for Quantitative Detection of Non-Small Cell Lung Cancer (NSCLC) Biomaker YES 1	View online	2023
Quantum Dot-Sensitised Estrogen Receptor-α-Based Biosensor for 17β-Estradiol	View online	2023
Green synthesis of nanomaterials from sustainable materials for biosensors and drug delivery	View online	2022
Current Biosensors Used For Early Detection of Lung Cancer Biomarkers	View online	2021
Biomarkers: Promising Tools for Detection of Early- Stage-Lung Cancer	View online	2021
Nickel-Palladium-Based Electrochemical Sensor for Quantitative Detection of Formaldehyde	View online	2018
Evaluation of chemistry performance in secondary schools in nomadic pastoralist communities of Kajiado and Narok counties in Kenya	View online	2020
A Potential masking approach in the detection of dopamine on 3- mercaptopropionic acid capped ZnSe quantum dots modified gold electrode in the presence of interferences	View online	2010
Impedimetric Response of a Label-Free Genosensor Prepared on a 3- Mercaptopropionic Acid Capped Gallium Selenide Nanocrystal Modified Gold Electrode	View online	2011
Impedimetry and microscopy of electrosynthetic poly(propylene thiophenimine)-co-poly(3,4 ethylene dioxothiophene) dendritic star copolymer	View online	2011
Synthesis and Conjugation of Silver Nanoparticles With Beta Ampicillin (2) Antibiotic	View online	2022

POSTGRADUATE STUDENTS SUPERVISION

NAME	PROJECT TITLE	PERIOD
Nachaki Earnest Ojiambo	Fabrication of Nickel-Palladium Based Electrochemical Nanosensor for Quantitative Detection of Formaldehyde in Water	2017-2019
Abongile Nwabisa Jijana-	The Fabrication of an electrochemical ZnSe quantum dot -CYP3A4 based biosensor for determination of 17-β-Estradiol (an Endocrine Disrupting Compound)	2009-2010
Waweru James Gitau	Development of Hexadecylamine Capped Indium Telluride Quantum Dots Sensors for the Determination of Mammaglobin- A Breast Cancer Biomarker	Ongoing
Ezo Nxusani	GaSe quantum dots biosensor for the determination of 17-alpha ethinyl estradiol in water.	2011-2012
Muthimi Onesmus Muyalo	Determination of Selected Poly-Aromatic Hydrocarbons in Roasted Maize in Kitui County, Kenya	Ongoing
Dickson Moenga Hezron Onyangore	FORMULATION and in vitro ASSAY OF SILVER NANOPARTICLES-PENICILLIN CONJUGATES AGAINST Escherichia coli AND Staphylococcus aureus	2019-2022
Lucy Kiio	Fabrication of A Nanostructured Biosensor For Early Detection of Lung Cancer Biomaker Using Electrochemical Methods.	2019-2023