



RHODES UNIVERSITY, MAKHANDA, SOUTH AFRICA

STUDENT INFORMATION



MS EMIHLE BENISE (DOCTORAL STUDENT)

STUDENT NO: 18B2044

SUPERVISOR: DISTINGUISHED PROFESSOR TEBELLO NYOKONG

CONTACT DETAILS:

Rhodes University
Institute for Nanotechnology Innovation
P O Box 94
Makhanda (Grahamstown) 6140, South Africa
Email: emihle.benise1999@gmail.com

EDUCATION DETAILS:

Phd (Chemistry) currently – Rhodes University
MSc (Chemistry) 2024 – Rhodes University
BSc Honours (Chemistry) 2021 – Rhodes University
BSc (Chemistry & Biochemistry) 2020 – Rhodes University

RESEARCH TITLE/PROJECT:

Electrochemical sensing of the prostate specific antigen using graphitic material and phthalocyanine dye

PUBLICATIONS:

1. Emihle Benise, Tebello Nyokong

Electrochemical detection of prostate specific antigen in the presence of an aptamer and composites of cobalt phthalocyanine-exfoliated graphite

Polyhedron, 246 (2023) 116674 (1-10)

DOI: 10.1016/j.poly.2023.116674

<https://doi.org/10.1016/j.poly.2023.116674>

2. Emihle Benise, Sixolile Centane, James Oyim, Philani Mashazi, Tebello Nyokong

The development of composites of cobalt phthalocyanine with graphene oxide nanomaterials as biosensors for the detection of prostate-specific antigen

Polyhedron 277 (2025) 117591 (1-11)

DOI: 10.1016/j.poly.2025.117591

<https://doi.org/10.1016/j.poly.2025.117591>

CONFERENCES/WORKSHOPS:

DSI/Mintek Nanotechnology Innovation Centre (NIC) Annual Workshop

South African Medical Research Council (MRC), 11-12 October 2023

Oral Presentation

Emihle Benise, Lekhetso S. Mpeta and Tebello Nyokong

Co phthalocyanine-exfoliated graphite composite for the electrocatalytic detection of prostate specific antigen using an aptamer.

(2nd place – MSc Oral Presentation)