RHODES UNIVERSITY, GRAHAMSTOWN, SOUTH AFRICA

STUDENT INFORMATION

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EDUCATION DETAILS:

PhD (Chemistry) currently - Rhodes University, Makhanda, South Africa
MSc (Chemistry) 2020 – University of Zululand, South Africa
BScH (Chemistry) 2017 – University of Zululand, South Africa
BSc (Chemistry and Biochemistry) 2016 – University of Zululand, South Africa

PUBLICATIONS:

1. S.T. Mkhondwane, V.S.R. Rajasekhar Pullabhotla, Highly selective pH-dependent ozonation of cyclohexane over Mn/□-Al2O3 catalysts at ambient reaction conditions, Catalysts, 9 (2019) 958.

2. S.T. Mkhondwane, V.S.R. Rajasekhar Pullabhotla, Ozone initiated pH dependent oxidation of cyclohexane over Fe supported SiO2 and □-Al2O3 catalysts, Catalysis Today, Submitted.

3. Siphumelele Thandokwazi Mkhondwane, Refilwe Matshitse and Tebello Nyokong
Porphyrin-graphitic carbon nitride quantum dots decorated on titanium dioxide electrospun nanofibers for photocatalytic degradation of organic pollutants
Journal Of Coordination Chemistry (2022) 75 (15–16), 2150–2169
DOI: 10.1080/00958972.2022.2132153
https://doi.org/10.1080/00958972.2022.2132153

4. Siphumelele Thandokwazi Mkhondwane, Sithi Mgidlana, Yolande Ikala Openda, Lindokuhle Nene, Tebello Nyokong
Photosono catalytic behaviour of phthalocyanine when supported on electrospun nanofibers: The effect of radical initiators
Synthetic Metals 299 (2023) 117484 (1-12)
DOI: 10.1016/j.synthmet.2023.117484
https://doi.org/10.1016/j.synthmet.2023.117484

5. Siphumelele Thandokwazi Mkhondwane , Sithi Mgidlana , Tebello Nyokong
Asymmetric phthalocyanine-graphitic carbon nitride nanosheets conjugate on zinc oxide fibers for combined ultrasound and visible light driven degradation of Rhodamine 6G
Journal of Photochemistry & Photobiology, A: Chemistry 447 (2024) 115245 (1-12)
DOI: 10.1016/j.jphotochem.2023.115245
https://doi.org/10.1016/j.jphotochem.2023.115245

6. Siphumelele Thandokwazi Mkhondwane, Sithi Mgidlana, Yolande Openda, Nnamdi Nwahara, Tebello Nyokong
Phthalocyanine conjugated manganese ferrite nanoparticles embedded in TiO_2 fibers for photo-, sono- and photosono-catalytic degradation of Rhodamine 6G
Catalysis Today 432 (2024) 114644
DOI: 10.1016/j.cattod.2024.114644
https://doi.org/10.1016/j.cattod.2024.114644

7. Siphumelele Mkhondwane, Godfred Sebiawu, Sithi Mgidlana, Yolande Openda, Nnamdi Nwahara, John Mack, Tebello Nyokong
Photosono activation of peroxymonosulfate using A_3B phthalocyanines supported on titanium dioxide nanofibers for degradation of Rhodamine 6G
Synthetic Metals 307 (2024) 117699 (1-16)
https://doi.org/10.1016/j.synthmet.2024.117699

8. Siphumelele Thandokwazi Mkhondwane , Tebello Nyokong
The use of phthalocyanines@g-C_3N_4 nanosheets conjugates supported on TiO_2 fibers for photosono-catalytic degradation of rhodamine 6G
Diamond & Related Materials 153 (2025) 112067
https://doi.org/10.1016/j.diamond.2025.112067

CONFERENCES/WORKSHOPS:

1. Oral presentation, **Faculty of Science and Agriculture symposium**, 2018, University of Zululand Science Centre.

2. Oral presentation, **CGPMB international conference on genometrics and proteometrics**, 2019, KZN,
UMfolozi Casino.

3. Poster presentation, Catalysis Society of South Africa (CATSA), 2019, Cape Town, Langebaan, Club Mykonois.

4. **12th International Conference on Porphyrins & Phthalocyanines (ICPP-12)**
Madrid, Spain 10-15 July 2022
Oral Presentation:
Siphumelele Mkhondwane, Refilwe Martshitse and Tebello Nyokong
TiO2 electrospun nanofibers decorated with conjugates of porphyrin with graphitic carbon nitride quantum dots for photodegradation of organic pollutants.

5. **11th Nanosciences Young Researchers' Symposium (NYRS – 2023)**
Nelson Mandela University, 7 Sept 2023
Poster Presentation
S Mkhondwane, S Mgidlana, T Nyokong
Zinc oxide nanofibers decorated with graphitic carbon nitride nanosheets-phthalocyanine conjugate for combined ultrasound and visible light degradation of organic pollutants.
(3rd place – PhD Poster Presentation)