RM

Mabore Jerida Raseala

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Professional Summary

A SACNASP(Candidate Nat. Sci) registered Master of Science holder with extensive experience researching materials and contributing to effective product development. Solid foundation for improving production quality through thorough evaluation. Demonstrated knowledge of experimental and practical application strategies. A Golden Key International Honour society candidate. As a highly motivated and detail-oriented PhD candidate in Chemistry, I possess a deep understanding of chemical principles and research methodologies. With a strong academic background and laboratory experience, I excel in designing and conducting experiments, analysing data, and interpreting results. My research focuses on material science, water remedial technologies and water reuse, and I am committed to advancing knowledge and developing innovative solutions in this field. I am eager to leverage my expertise and skills to secure a challenging role in industry or academia, driving scientific progress and collaboration.

Lab work History

University of Limpopo - Laboratory Assistant
Mankweng, Limpopo
01/2018 - 12/2018

- Implication of laboratory safety and rules of performing experiment.
- Cleaned and sanitized equipment and workstation in compliance with health and safety regulations.
- Followed safety procedures when handling and disposing of hazardous chemicals.
- Prepared chemical concentrations and standards.
- Analyzed 100% data to create and organize graphs, charts, and documents for publications and presentation.
- Developed, maintained and improved experimental data spreadsheets.
- Safely prepared reagents, compounds and lab test solutions.
- Ordered supplies, obtained pricing and quotes, prepared purchase requests and maintained organized expense log.
- Documented attendance and completed assignments to maintain full class and student records.
- Prepared lessons according to course outline to convey all required material and deepen student understanding of subject matter.

Publications

- M. J. Raseala, M. M. Motsa, R. A. Sigwadi, and R. M. Moutloali, “Incorporation of graphene oxide into zwitterion containing

Skills

- Specimen analysis
- Lab equipment maintenance
- Assisting and tutoring
- Data and statistical analysis
- Lab testing and reporting
- Research skills
- Innovation and planning
- FTIR, XRD, SEM, and TEM instrument usage
- Usage of conductivity meter, pH meter and TDS devices
- Attention to detail
- Testing and Sampling
- Communication
- Presenting

Other Skills

- Driving with Code 10 driver’s license

Education

2021
University of South Africa (UNISA)
Doctor of Philosophy: Chemistry
Currently status: Submitted. Awaiting results
Research topic: Zwitterionic polyethersulfone membranes for wastewater treatment.

12/2020
University Of Johannesburg

polyethersulfone membranes to minimize fouling during the remediation of abattoir wastewater," *Journal of Industrial and Engineering Chemistry*, Oct. 2024, doi: 10.1016/j.jiec.2024.10.053.

- M. J. Raseala, M. M. Motsa, R. A. Sigwadi, and R. M. Moutloali, "Zwitterion grafted polyethersulfone ultrafiltration membranes integrated with coagulation process for fouling mitigation in sewage wastewater treatment," *Chemical Engineering Journal Advances*, p. 100594, Feb. 2024, doi: 10.1016/j.ceja.2024.100594.
- M. J. Raseala, F. Matebese, M. M. Motsa, R. A. Sigwadi, and R. M. Moutloali, "Assessment and understanding of the impact of zwitterionization of polyethersulfone on the fouling of the polymeric membranes used for ultrafiltration of abattoir wastewater," *J Environ Chem Eng*, vol. 13, no. 3, p. 116120, Jun. 2025, doi: 10.1016/j.jece.2025.116120.
- M. J. Raseala, M. L. Motloutsi, F. Matebese, and R. M. Moutloali, "FILTRATION: MAKING DIRTY WATER CLEAN ENOUGH TO DRINK."
- F. Matebese, M. J. Raseala, M. L. Motloutsi, and R. M. Moutloali, "Fabrication and Characterization of PAA-g-PES Polymers and Resultant Membranes: Combating Fouling through the Introduction of Hydrophilic PAA Brushes," *ACS Omega*, 2025, doi: 10.1021/acsomega.4c05443.

Additional Information

REFERENCES:

- University of South Africa

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0695532983/0845058494
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- University of South Africa

Dr Sigwadi R
0729775541
Sigwara@unisa.ac.za

- University of Limpopo

Dr. Mampa R
HOD Chemistry
0152682334/0836548312
richard.mampa@ul.ac.za

Johannesburg
Master of Science: Chemistry
Research Topic: Photocatalytic polymeric materials for remediation of cyanide ions from simulated and real wastewater samples

12/2018
University Of Limpopo
Limpopo
Bachelor of Science Honours: Chemistry
Majored in:

- Advanced Organic Chemistry
- Advanced Physical Chemistry
- Advanced Inorganic Chemistry
- Advanced Analytical Chemistry
- Research Project

12/2017
University Of Limpopo
Limpopo
Bachelor of Science: Physical Sciences
Majored in:

- Gene structure, Function, molecular biology
- Proteins, enzymes, and biochemical techniques
- Physical Chemistry (III)
- Analytical Chemistry (III)
- Inorganic Chemistry (III)
- Organic Chemistry (III)

12/2014
Ditlalemeso Secondary School
Mankweng, Turfloop
Matric: Grade 12
Subjects Passed:

- Sepedi home language
- English first additional language
- Mathematics
- Life Orientation
- Geography
- Life science
- Physical science.