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CAROLINE LOMALUNGELO DLAMINI – ENVIRONMENTAL ANALYTICAL CHEMISTRY

OBJECTIVE

An Environmental/Analytical Chemistry professional with Chemical Pollution Management in Water Resources plus Environmental Protection and Human Health acumen, strong ability to carry out scientific research and publish it in high impact factor journals, review papers for publication in international journals and disseminate knowledge in Chemistry to students and other stake holders through her experience as a Teacher. Strong logical conclusion drawing abilities, good communication skills, critical thinking capabilities and detail orientated skills. Vast experience in research in management of the hostile acidic waters – removal of toxic metals from acid mine drainage (AMD).

SKILLS & ABILITIES

Attention to detail

Problem solving skills

Research and research writing skills

Operation of state-of-the-art analytical instruments

Content scaffolding skills

Interpersonal and Intrapersonal skills

High level of confidentiality

Assessment skills

EXPERIENCE

LECTURER – CHEMISTRY at William Pitcher College

October 2019 – Present

- Offer Chemistry content courses to Secondary Teacher's Diploma students
- Offer Chemistry content courses to Primary Teacher's Diploma students
- Offer Science Education courses to Secondary Teacher's Diploma students
- Offer Science Education courses to Primary Teacher's Diploma students
- Supervise Science projects for both Primary and Secondary Teacher's Diploma completing students

- Mentor students on research writing skills

LECTURER – MATHEMATICS at William Pitcher College

March 2010 – October 2019

- Offer Mathematics content courses to Secondary Teacher's Diploma students
- Offer Mathematics content courses to Primary Teacher's Diploma students
- Offer Mathematics Education courses to Secondary Teacher's Diploma students
- Offer Mathematics Education courses to Primary Teacher's Diploma students
- Supervise Mathematics and Science projects for both Primary and Secondary Teacher's Diploma completing students

TEACHER – SINIOR SECONDARY

May 1990 – March 2010

- Teach Chemistry and Mathematics to secondary school learners
- Head of the Science Department- at school (July 1992 – March 2010)

EDUCATION

DOCTOR OF PHILOSIPHY IN CHEMISTRY (PhD - CHEMISTRY), UNIVERSITY OF SOUTH AFRICA (2016-2019)

MASTER OF SCIENCE IN ENVIRONMENTAL RESOURCES MANAGEMENT Majoring in ENVIRONMENTAL CHEMISTRY AND MANAGEMENT (M. Sc – ERM), UNIVERSITY OF SWAZILAND (2009 – 2013)

BACHELOR OF SCIENCE- (B. Sc) with a CONCURRENT DIPLOMA IN EDUCATION (CDE), UNIVERSITY OF SWAZILAND (1986-1990)

UNIVERSITY OF CAMBRIDGE GENERAL CERTIFICATE OF EDUCATION (GCE), FRANSON CHRISTIAN HIGH SCHOOL (1984-1985)

ADDITIONAL TRAINING AND EXPIRIENCE

TEACHER TRAINER IN CHEMISTRY FOR AFRICA. SMASSE, NAIROBI, OCTOBER 2006

SYLLABUS DEVELOPER, PHYSICAL SCIENCE (SGCSE)

SGCSE PHYSICAL SCIENCE EXAMINER (SETTING EXAMINATIONS WITH THEIR MARK GUIDES THEREOF)

MARKING THE EXAMINATION PAPERS

DATA CAPTURING OF EXAM MARKS

CONFERENCES

Oral presentation: Novel Nanosorbents for Removal of Metal Ions from Acid Mine Drainage. 19th WaterNet/WARFSA/GWP – SA Symposium, 31st October – 2nd November, 2018. Integrated Water Resources Development and Management: Managing Water for the Future in a changing Environment in Eastern and Southern Africa. Avani Victoria Falls Resort, Livingstone, Zambia.

Oral presentation: Novel Nanocomposite Sorbents for Toxic Metals from Acid Mine Drainage. 3rd International SA-Taiwan Workshop, August 24, 2018. UNISA Science Campus (C-301 GJ Gerwel Auditorium), SA.

Oral presentation: A comparative study of metal levels in water and sediments in AMD polluted water bodies in Ngwenya, Swaziland. 5th Southern and Eastern African Network for Analytical Chemists (SEANAC) International Conference. 9-13 June, 2014; Reef Hotel, Mombasa, Kenya.

Poster presentation: Environmental Assessment of Acid Mine Drainage in Ngwenya, Swaziland. 12th International Chemistry Conference in Africa (ICCA-2013) international Conference. 8-12 July 2013; UNISA, Pretoria, South Africa.

Poster presentation: A Preliminary Study of an Environmental Impact assessment (EIA) on Acid Mine Drainage (AMD) in Swaziland. 4th Southern and Eastern African Network for Analytical Chemists (SEANAC) International Conference. 7-11 July, 2012; Joaquim Chissano Conference Center, Maputo, Mozambique.

PUBLICATIONS

Novel Hybrid Metal loaded Chelating Resins for Removal of Toxic Metals from Acid Mine Drainage. Water Sci Technol (2020) 81 (12): 2568–2584. DOI: https://doi.org/10.2166/wst.2020.285

Polymeric Ion Exchanger Supported Ferric oxide Nanoparticles as Adsorbents for Toxic Metal Ions from Aqueous Solutions and Acid Mine Drainage. Journal of Environmental Health Science and Engineering (2019) https://doi.org/10.1007/s40201-019-00388-5

Acid Mine Drainage Pollution Remediation using Hybrid Chelating Ion-Exchange/$HZrO_2$ Nanocomposite Adsorbents. SN Applied Sciences (2019) 1:1618 | https://doi.org/10.1007/s42452-019-1580-3

Relative Levels, Factors and Impacts of Nitrates and Fluorides in some Groundwater Bodies in the Lubombo and Manzini Regions of Swaziland. Journal Of Harmonized Research in Applied Sciences (2015) 3(2):116-124

Analysis of Chemical Oxygen Demand and Total Organic Carbon in Acid Mine Drainage Polluted Water Bodies. (2014). https://www.johronline.com

A study of Environmental Assessment of Acid Mine Drainage in bottom Sediments of Dams and Streams in areas around Ngwenya Iron Ore Mine, Swaziland. International Journal of Chemical Science and Technology, IJCST Vol. 5, Issue 2, April - June 2014

Environmental Assessment of Acid Mine Drainage Pollution on Surface Water Bodies around Ngwenya Mine, Swaziland. Journal of Environmental Protection, Vol. 5 No. 2, 2014, pp. 164-173. doi: 10.4236/jep.2014.52020.

A Study of Environmental Assessment of Acid Mine Drainage in Ngwenya, Swaziland. Journal of Environmental Protection (2013) 04(11):20-26 DOI: 10.4236/jep.2013.411B003

PUBLISHED BOOKS:

- Environmental Assessment of Acid Mine Drainage in Ngwenya Swaziland. Lambert Academic Publishers

REVIEWED MANUSCRIPTS:

- Have reviewed more than 20 manuscripts, mostly recorded by Publons

SUBMITTED MANUSCRIPTS:

- **Preparation, characterization and application of Hybrid Polymeric Ion-exchangers dispersed with Ti(IV) Oxide Particles for Acid Mine Drainage Pollution Remediation** (submitted to Arabian Journal of Chemistry)

REFERENCES

PROFESSOR J. M. THWALA

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PROFESSOR T. A. M. MSAGATI

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