

Dr. M. Hlophe

- 1. Age** 55 years
- 2. Address** Department of Chemistry, North-West University (Mafikeng campus), Private Bag X2046, Mmabatho 2735, South Africa.
- 3. E-mail** Mbhuti.hlophe@nwu.ac.za
- 4. Phone/Fax** +27 18 389 2213, +27 18 389 2052.
- 5. Educational Qualifications** B.Sc. (Chemistry); University of Botswana and Swaziland; M.Sc.(Advanced Analytical Chemistry); University of Bristol (United Kingdom); Ph.D. (Electrochemistry); North-West University (Mafikeng campus).
- 6. Present Responsibilities** Discipline Chair (Chemistry), Teaching and research.
- 7. Specialization** Electrochemistry
- 8. Areas of Research** Electrode kinetics, geochemical exploration and water research.
- 9. Current Interests** Water quality monitoring, water treatment by nanomembranes, synthesis of polymeric membranes.
- 10. Experimental Facilities** Dead-end module reactor, cross-flow module reactor, ion chromatograph and electrochemical workstation.
- 11. General** Mbhuti Hlophe is currently Discipline Chair for the Chemistry subject group at North-West University (Mafikeng campus) and is leader of the Water Research Center. The major focus of the center is quality training in water technology to produce graduates that can be immediately productive in the field. The major emphasis is on water treatment for provision of potable water to rural communities. He has already completed two out of three water research projects for the Water Research Commission of South Africa. He is a principal investigator in the IBSA flagship project on water purification.

12. Five relevant publications in last five years

- Hillie, T., Munasinghe, M., Hlophe, M. and Deraniyagala, Y. (2006). **Nanotechnology, Water & Development**. Meridian Institute's Global Dialogue on Nanotechnology and the Poor: Opportunities and Risks (GNDP); <http://www.merid.org/nano/waterpaper>.
- Hillie, T. and Hlophe, M. (2007). **Nanotechnology and the challenge of clean water**. Nature Nanotechnology, 2 (11), 663 – 664.
- Hlophe, M. and Hillie, T. (2008). A chapter titled **Challenges to implementing nanotechnology solutions to water issues in Africa** written in **Nanotechnology Applications: Solutions for Improving Water Quality** book, ISBN 9780815515784 (William Andrew: Applied Science Publishers).

4. Hlophe, M. and Venter, M. (2008). **The testing of a membrane unit for the removal of nitrate, chloride, fluoride, sulphate, calcium and magnesium ion pollutants from groundwater, and the monitoring of rural consumer knowledge and attitude to water purification.** Water Research Commission (WRC) project K5/1529 (A report has been submitted for publication by the WRC).
5. Hlophe, M. and Selvaratnam, M. (2008). **Nitrogenous pollution in borehole waters due to pit latrines and fertilizers** (comments of peer-reviewers being implemented for re-submission to WATER SA).