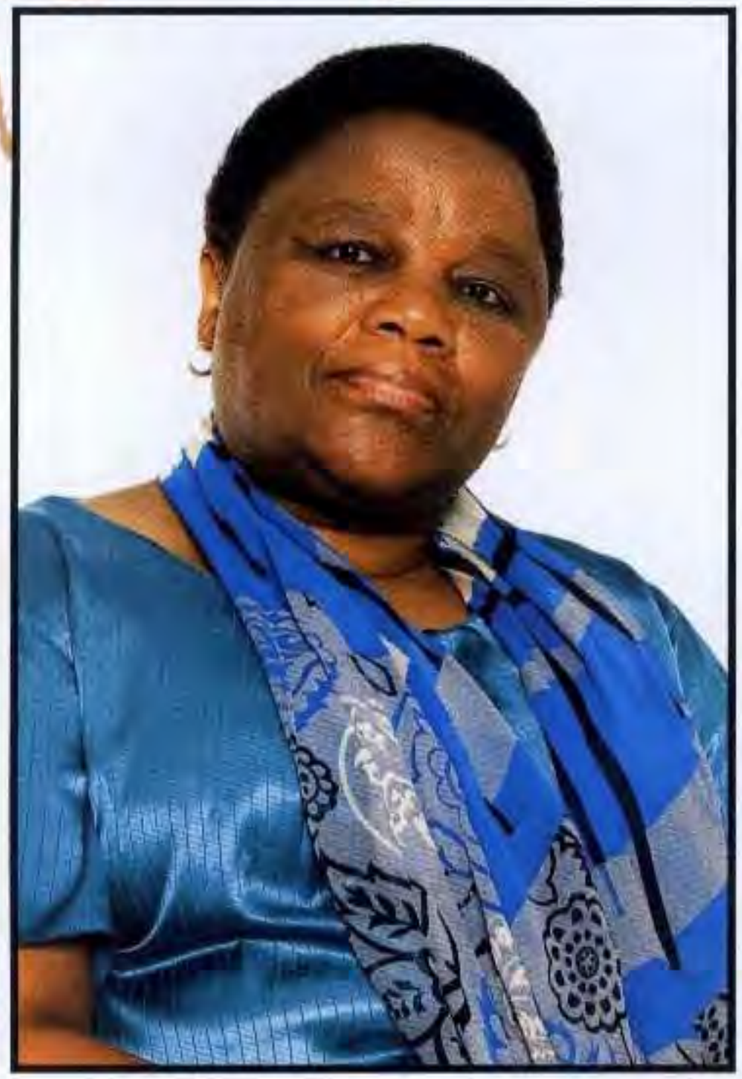

Professor Tebello Nyokong

Professor of Medicinal Chemistry and Nanotechnology, Rhodes University

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Research into harnessing light for cancer therapy and environmental cleanup has won Rhodes Professor Tebello Nyokong a spate of honours, from the national Order of Mapungubwe: Bronze in 2005 to last year's Africa-Arab state L'Oréal-Unesco award for Women in Science.

Nyokong's research focuses on photodynamic therapy, which uses laser light to activate dyes for the treatment of cancer. The dyes contain nanoparticles that can absorb and re-emit light, enabling scientists to target errant cells and destroy them. Light therapy has been developed as an alternative to chemotherapy, and Nyokong's research includes determining which dyes are most efficient under the harsh African sun.

Nyokong became interested in chemistry as a high-school student in Lesotho because teachers told her it could be used to heal the sick. It can also be used to heal the land. Nyokong is director of the sensors platform of the DST-Mintek and Nanotechnology Innovation Centre, based at Rhodes, which is looking into safer ways to purify water, using light. The components of pollutants can be more dangerous than the pollutants themselves once they are broken up and Nyokong is investigating the use of certain dyes as photosensitisers to transform harmful pollutants into less harmful elements.

A graduate of the University of Lesotho, she earned an MSc in chemistry (at McMaster University) and a PhD from the University of Western Ontario, pursuing post-doctoral studies at the University of Notre Dame on a Fulbright fellowship. She taught briefly at the University of Lesotho before joining Rhodes University. She is also an adjunct professor at the University of Tromso in Norway.

— Barbara Ludman