



National Science and
Technology Forum

Sustainable development and the chemical elements

Chemical elements from the perspective of the UN's Sustainable
Development Goals (SDGs)

16 May 2019, Midrand, Gauteng #IYPT2019

Biographies of Speakers



Dr Mahlori Mashimbye

Dr Mahlori Jeffrey Mashimbye is a graduate of the universities of Fort Hare, Rhodes, KwaZulu-Natal and Pretoria. He spent one year (July 1994 – June 1995) at the University of Alberta, Canada, engaged with postdoctoral studies. Before joining the Department of Science and Technology in October 2003, he worked at the University of Venda as a Senior Lecturer and Head of Department of the Department of Chemistry. While at the University of Venda, he also served as a dean of the School of Mathematics and Natural Sciences. He is presently a director of Chemical and Related Industries, at the Department of Science and Technology.



Prof Paul Nex

Paul obtained a first-class BSc. Honours degree in Earth Science from Oxford Brookes University in 1991 and a PhD for his research on uranium mineralization in sheeted leucogranites in Namibia from the National University of Ireland in 1997. His current research interests are in critical metals, particularly antimony, germanium, lithium, tin and rare earth elements, uranium mineralization in Namibia and mineralization in the Bushveld Complex. Prior to joining WITS University as a Professor of Economic Geology in early 2014, Paul worked for Umbono Capital as Senior Geologist since 2007, evaluating natural resources projects including oil and gas, coal, diamonds, PGE's, magmatic Ni-Cu sulphides, gold, rare earth elements, uranium, dimension stone, and industrial minerals.



Prof Edward Nxumalo

Prof Edward Nxumalo is an Associate Professor in the Nanotechnology and Water Sustainability Research Unit in the University of South Africa. He previously worked as a Senior Lecturer and Researcher at the University of Johannesburg. As an NRF rated researcher, he has authored and co-authored over 50 peer-reviewed scientific journal papers including book chapters and conference proceedings. He mentors and supervises a wide range of masters and doctoral students and postdoctoral researchers in the fields of nanotechnology, water science and membrane technology in various institutions. His research work focuses on carbon-based membranes, mainly fabrication, analysis, advanced characterization and application in various fields including energy, water treatment, desalination and nanofiltration. He also focuses on the synthesis and advanced characterization of heteroatomic nanomaterials and doped carbons for diverse applications and the catalytic application production of a range of nanomaterials.

Prof Edward Nxumalo is a professional member of several scientific bodies such as the African Membrane Society, South African Chemical Institute, Royal Society of Chemistry and International Water Association. He sits on Boards for various organizations including the African Membrane Society, South African Nanotechnology Initiative and SabiNANO Company. He is the current president of the South African Nanotechnology Initiative; an organization that is central to all nanotechnology activities in South Africa.



Ms Nathalie Mat

Nathalie Mat RD(SA) is a clinical dietitian with a master's degree in Dietetics from the University of Pretoria. Nathalie has worked in State and Private hospitals and now works in private practice in Johannesburg. She has been published across a variety of media and platforms including Business Day, e-tv, 702 and 5FM. She has worked as a speaker, guest lecturer and enjoys a variety of corporate work. Recently, Nathalie teamed up with Fabufit's founder, Wardah Hartley to write a South African First: Fabufit Pregnancy workout and nutrition guide. Nathalie is registered with the Health Professionals Council of South Africa and is an international member of the Academy of

	<p>Nutrition and Dietetics. Nathalie's key areas of interest include women's health and executive nutrition.</p>
	<p style="text-align: center;">Mr Harry Dube</p> <p>Mr PH Dube works for the South African Department of Agriculture, Forestry and Fisheries under the Directorate: Agriculture Inputs Control (Act 36 of 19947). His job includes evaluation of applications for registration of fertilizer products under the Fertilizers, Farm Feeds, Stock Remedies and Agricultural Remedies Act (Act 36 of 1947). His job also includes reviewing of legislation related to fertilizers, drafting guidelines and regulations.</p> <p>Mr Dube worked for the Limpopo Department of Agriculture as an agricultural scientist from 2008 until 2014 when he joined DAFF. He holds a BSc degree in soil science from The University of Limpopo and a master's degree in agriculture from The University of New England (Australia) with specific specialisation in soil heavy metal contamination (Lead and Cadmium).</p>
	<p style="text-align: center;">Dr Palesa Sekhejane</p> <p>Dr Palesa Sekhejane holds an MTech and a DTech in health sciences from the University of Johannesburg. She is a medical technologist who specialised in biophotonics, which is the application of light-based (laser) medicine to a biological system, in a simulated diabetic model for example, as well as photodynamic therapy for cancer treatment. Sekhejane is a research specialist at the HSRC. During her studies, she published work emanating from her research experiments, resulting to 11 journal articles and a book chapter. Her current research interests are in health governance, biosciences, biomedical innovation and technology. She was part of the scientific committee and organising committee of the first Gender Summit Africa in 2015. She was also a member of the woman and gender cluster of the Economic, Social and Cultural Council (ECOSOCC), an advisory organ to the African Union. Dr Sekhejane is a research associate at the University of Johannesburg (UJ) and a co-supervisor of master's candidates in the Applied Sciences Research Unit of UJ's Faculty of Sciences. She is also a member of Organisation for Women in Sciences Development, which champions and addresses the obstacles faced by women in developing countries. This landed her into participating at the launch of prestigious Next Einstein Forum. Most recently, she became the co-chairperson of the UJ-led maiden international conference on Food Security and Safety. She also forms part of L'Oréal Sub Saharan team for Women in Sciences.</p>
	<p style="text-align: center;">Prof John Bradley</p> <p>Prof Bradley was born and educated in the UK. After completing a PhD and post-doctoral fellowship in chemistry, he took a lecturer post at Wits School of Chemistry in 1964. He taught chemistry at Wits for nearly 40 years, during which time he led several educational initiatives directed to educationally-disadvantaged students, and to school science teachers. During this period, he also initiated the post-graduate School of Science Education in the Faculty of Science, and the RADMASTE Centre. He also supervised 34 doctoral and masters' candidates (mostly in chemistry education), initiated the UNESCO-associated Centre for Microscience Experiments, and was, for two years, President of the SA Chemical Institute. With the transfer of maths and science education to the Wits School of Education in 2003, he continued as Director of the RADMASTE Centre, the activities of which were aimed at maths and science teachers and teacher resources development. In 2013 he was appointed by the Minister of Basic Education to chair the Ministerial Task Team on The National Strategy for MST Education. He continues as an Honorary Professor in the Wits School of Education, teaching BEd Physical Sciences students and BSc Hons (science education) students.</p>