

**Welcome to the
Graduation Ceremony
of the
University of Johannesburg
4 June 2018**

**Welkom by die
Gradeplegtigheid
van die
Universiteit van Johannesburg
4 Junie 2018**

**Le a Amogelwa
Moletlong wa Dikapešo wa
Yunibesithi ya Johannesburg
4 Phupu 2018**

**Niyamukelwa
eMcimbini wokweThweswa kweZiqu
weNyuvesi yaseJohannesburg
4 kuNhlangulana 2018**

UNIVERSITY OF JOHANNESBURG

CHANCELLOR

Prof NS Ndebele
BA (Lesotho), MA (Cambridge UK), PhD (Denver USA)

SENIOR OFFICE-BEARERS OF THE UNIVERSITY

VICE-CHANCELLOR AND PRINCIPAL

Prof T Marwala
BS Eng (Case Western Reserve USA), MEng (UP), PhD (Cambridge UK)

DEPUTY VICE-CHANCELLOR ACADEMIC

Prof A Parekh
BA, BA Hons, MA (UDW), MA (Kansas USA), DPhil (UDW)

DEPUTY VICE-CHANCELLOR: RESEARCH AND INTERNATIONALISATION

Prof S Sinha
BEng, MEng, PhD (UP)

REGISTRAR

Prof IC Burger
BA, HEd, BA Hons, MA, PhD (RAU)

CHIEF FINANCIAL OFFICER

Ms N Mamorare
BCom (Rhodes), BCom Hons (UKZN), CA (SA)

DEPUTY VICE-CHANCELLOR: EMPLOYEES AND STUDENT AFFAIRS

Ms KC Mketi
BA (Bophut), BA Hons (RAU), MBL (Unisa)

CHIEF OPERATING OFFICER

Prof A Swart
NDip, NHDip (TWR), BEd, MEd (RAU), DTech (TWR)

GENERAL COUNSEL

Prof PH O'Brien
BCom, LLB, LLM, LLD (RAU)

SENIOR EXECUTIVE DIRECTOR IN THE VICE-CHANCELLOR'S OFFICE

Dr N Vukuza
BA (Fort Hare), BA Hons (Rhodes), DTE (UNISA), MA (Wits), PhD (Stellenbosch)

EXECUTIVE DEANS

COLLEGE OF BUSINESS AND ECONOMICS

Prof D van Lill
BSc, BSc Hons, MSc, PhD (US)

FACULTY OF ART, DESIGN AND ARCHITECTURE

Prof F Freschi
BA (Wits), BA Hons (UCT), PhD (Wits)

FACULTY OF EDUCATION

Prof SJ Gravett
BA, HEd (PU for CHE), BEd, MEd, DEd (RAU)

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

Prof C Mbohwa (Acting)
BSc Eng (Hons), OMMS, PhD (TMIT Japan)

FACULTY OF HEALTH SCIENCES

Prof S Nalla (Acting)
BSc (Wits), BSc Hons (Wits), Certificate ELLD (UJ), PhD (Wits)

FACULTY OF HUMANITIES

Prof AB Broadbent
BA, BA Hons, MPhil, PhD (Cambridge UK)

FACULTY OF LAW

Prof LG Mpedi
B Juris, LLB (Vista), LLM (RAU), LLD (UJ)

FACULTY OF SCIENCE

Prof D Meyer
BSc, BSc Hons, MSc (RAU), PhD (California USA)

MEMBERS OF COUNCIL

CHAIRPERSON

Mr MS Teke

DEPUTY CHAIRPERSON

Dr Y Ndema

MEMBERS

Prof H Abrahamse
Mr FM Baleni
Ms S Dlamini
Ms K Gugushe
Prof D Hildebrandt
Ms X Kakana
Mr G Khosa
Prof C Landsberg
Dr J Manyaka
Prof T Marwala
Ms Z Matlala
Ms BJ Memela-Khambula
Mr F Netshivha
Prof A Parekh
Mr C Phetla
Dr WP Rowland
Mr K Thomas
Dr M Tom

Programme

Monday, 4 June 2018 at 13:00

To ensure good order during the ceremony all those present are requested to leave the Auditorium only after the ceremony has been concluded.

The academic procession enters the Auditorium and the members of the procession take their seats on the stage.

The choir sings Gaudeamus Igitur (or a CD is played) while those present remain standing.

The Chancellor constitutes the congregation.

Choir.

Welcome.

The relevant Executive Dean presents the candidates to the Chancellor for the conferment of a degree/diploma/certificate.

Singing of the National Anthem.

The Chancellor dissolves the congregation.

The academic procession leaves the Auditorium while those present remain standing.

Lenaneo

Mošupologo, 4 Phupu 2018 ka 13:00

Go kgonthiša gore dilo di sepela ka tshwanelo nakong ya moletlo, bohle bao ba tilego moletlong ba kgopelwa go tšwa ka Holong ya kopano feela ka morago ga ge moletlo o phethilwe.

Sehlopha sa dirutegi se tsena ka Holong ya kopano gomme maloko a sehlopha se a dula ditulong tša ona sefaleng.

Khwaere e opela Gaudeamus Igitur (goba CD e tlo bapalwa) mola bao ba lego gona ba tšwela pele go ema.

Mokhanseliri o kopanya phuthego.

Khwaere.

Dikamogelo.

Hlogophethiši ya maleba ya lefapha e hlagiša dialoga go Mokhanseliri gore di newe tikrii/diploma/setifikeiti.

Go opelwa ga Koša ya Setšhaba.

Mokhanseliri o phatlalatša phuthego.

Sehlopha sa dirutegi se tšwa ka Holong ya kopano mola bao ba lego gona ba tšwela pele go ema.

Program

Maandag, 4 Junie 2018 om 13:00

Ter wille van die ordelike verloop van die plegtigheid
word alle aanwesiges vriendelik versoek
om die Ouditorium nie voor die einde van die plegtigheid te verlaat nie.

Die akademiese proses kom die Ouditorium binne en neem op die verhoog plaas.
Die koor sing Gaudeamus Igitur (of 'n CD word gespeel) terwyl die aanwesiges staan.

Die Kanselier stel die kongregasie saam.

Koor.

Verwelkoming.

Die betrokke uitvoerende dekaan stel die kandidate aan die Kanselier voor vir die
toekenning van 'n graad/diploma/sertifikaat.

Sing van die volkslied.

Die Kanselier ontbind die kongregasie.

Terwyl die aanwesiges bly staan, verlaat die akademiese proses die Ouditorium.

Uhlelo

uMsombuluko, 4 kuNhlangulana 2018 ngelo-13:00

Ukuze kuqinisekwe ukuthi konke kuhamba kahle ngesikhathi somcimbi, bonke abakhona
bacelwa ukuba baphume eHholweni kuphela lapho umcimbi usuphuthuliwe.

Udwendwe lezifundiswa lungena ehholweni bese amalungu odwendwe ahlala phansi
esiteji.

Ikwaya icula i-Gaudeamus Igitur (noma kudlalwa iCD) ngalenkathi labo abakhona
besamile.

UShansela uhlanganisa ibandla.

Ikwaya.

Ukwamukelwa.

Izinhloko Eziyiziphathimandla ezithintekayo zethula abafundi kuShansela weNyuvesi
ukuze bathole idigiri/iploma/isitifiketi.

Kuculwa iHubo Lesizwe.

Gaudeamus Igitur

Gaudeamus igitur,
Juvenes dum sumus;
Post iucundum iuventutem,
Post molestam senectutem
Nos habebit humus.

Vivat academia,
Vivant professores,
Vivat membrum quodlibet,
Vivat membra quaelibet;
Semper sint in flore!

English

Let us rejoice, therefore,
While we are young.
After a pleasant youth
After a troubling old age
The earth will have us.

Long live the academy!
Long live the professors!
Long live each student;
Long live the whole fraternity;
For ever may they flourish!

Sesotho sa Leboa

Ka gona, a re thabeng,
Re sa le ba bafsa.
Ka morago ga bofsa bjo bo bose
Ka morago ga go tšofala mo go nago le
mathata
Lefase le tla ba le rena.

Phela thuto phela!
Phelang diprofesa phelang!
Phelang baithuti phelang;
Phela kagišano ka botlalo phela;
O ka re ba ka phela gabotse goyagoile!

Afrikaans

Laat ons dan vrolik wees,
Terwyl ons jonk is;
Na 'n aangename jeug.
Na 'n onaangename oudag,
Sal die aarde ons hou.

Lank lewe die universiteit,
Lank lewe die professore,
Lank lewe elke student,
Lank lewe al die studente,
Mag hulle vir ewig hul jeug behou!

Zulu

Ngakho, masithokoze
Sisebasha nje.
Emva kobumnandi bobusha
Emva kwezinkinga zobudala
Umhlaba uzosithatha.

Phambili ngemfundo!
Phambili boSolwazi!
Phambili nakuwe mfundi;
Phambili ngenhlangano yonke;
Maziqhubeke ngonaphakade!

QUALIFICATIONS

1. National Diploma (N Dip)

Boshomane, Rosina Ramatsobane (Analytical Chemistry)
Kekana, Mokgaetji Sadie (Food Technology)
Khumalo, Ntombifuthi Patricia (Biotechnology)
Leapheka, Tshepo Concelia (Food Technology)
Lolwane, Naledi Nobantu (Food Technology)
Mabena, Pamela (Analytical Chemistry)
Majafa, Bruce Mmoloki (Biotechnology)
Makgotlho, Keamogetse Patronela (Biotechnology)
Maleke, Mpho Sebabiki (Food Technology)
Maloma, Mogotladi Delma (Biotechnology)
Mangena, Kedibone Prince (Food Technology)
Masiteng, Ntokozo Siboniso (Biotechnology)
Masuku, Nkosinathi Brian (Biotechnology)
Matthews, Lerato Portia (Food Technology)
Mdletshe, Nkosinathi Immanuel (Food Technology)
Mkwanazi, Pinki (Biotechnology)
Mlotshwa, Sphesihle Jacqueline (Food Technology)
Mobeng, Neo Webster (Food Technology)
Mogodi, Karabo Seshele (Food Technology)
Moloko, Neo Mary Jeminah (Biotechnology)
Mqoco, Sibusiso Hemilton (Biotechnology)
Ngcobo, Duduzile Hapiness (Analytical Chemistry)
Ngubane, Thobeka Rachel (Biotechnology)
Ngwenya, Celiwe Prudence (Biotechnology)
Qawula, Nomatolo (Biotechnology)
Ramatong, Lebogang Mpho (Analytical Chemistry)
Segage, Thulane Elias (Analytical Chemistry)
Selowa, Matome Thabo (Food Technology)
Sibeko, Thembelihle Gladman (Analytical Chemistry)

2. Bachelor of Technology (B Tech)

Lehong, Tebogo Makeleleng (Biotechnology)
Maboa, Lebogang Rachel (Food Technology)
Mnisi, Thobile Princess (Biotechnology)

Nteleki, Sandile (Food Technology)
Simelane, Bhekithemba Patrick (Food Technology)

3. Bachelor of Science (BSc)

Magolego, Isaac Selaelo (Chemistry and Physics)
Majagoba, Onneil Baitshepi Lizzy (Geology and Chemistry)
Makaleng, Fortunate Mahlatse (Geology and Chemistry)
Makgaka, Thato Leon (Biochemistry and Chemistry)
Malinga, Promise Ntombizile (Chemistry and Mathematics)
Maqunga, Nomathamsanqa Prudence (Biochemistry and Chemistry)
Marebane, Mahlogonolo Fortune (Chemistry and Physics)
Rebello, Maxine (Chemistry and Mathematics)
Serumula, Kwena Naledi Melanie (Physics and Applied Mathematics)
Tjabadi, Evah Mashikwane (Biochemistry and Chemistry)

4. Bachelor of Science Honours (BSc Hons)

Cannell, Sharri Leigh (Zoology)
Diamond, Rachel (Chemistry)
Engelbrecht, Carine (Biochemistry)
Fourie, Charles Henry (Physics)
Hoenselaar, Jason Paul (Physics)
Legolie, Jeremy Benedict (Chemistry)
Lesejane, Mmapaseka Lillian Prescilla (Chemistry)
Maake, Annah Mmalampa (Chemistry)
Mabena, Kgomotso Gift (Chemistry)
Madika, Lydia Khumo (Botany)
Mahlangu, Sicelo (Geology)
Mahloele, Sakhile Mordecai (Chemistry)
Marima, Rirhandzu Debra (Chemistry)
Mashangoane, Moshadi Jane (Botany)
Miya, Nonkululeko (Chemistry)
Mkhize, Naledi Seyland (Botany)
Mkhongi, Felicity (Geography)
Mtshweni, Khume Chamie (Zoology)
Ndou, Vathiswa Portia (Chemistry)
Rabalao, Tshogofatso Motlalepule (Chemistry)
Ramorwalo, Nyatsane Emmanuel (Geography)
Setati, Boitumelo (Chemistry)
Tibini, Siyabonga (Botany)
Tivani, Miehleketo Cecil (Geology)
Yafele, Robert Sibusiso (Chemistry)
Zwane, Zinhle (Chemistry)

5. Master of Technology (M Tech)

Biata, Nkositile Raphael (Chemistry) (with distinction)

Dissertation: Molecular and atomic spectrometric determination of selected elements in different sample matrices.

Supervisor: Prof PN Nomngongo

Co-supervisor: Dr J Ramontja

Co-supervisor: Dr N Mketi

Daji, Grace Abosede (Food Technology)

Dissertation: Phytochemical composition and antimicrobial activities of *Solanum retroflexum* leaves extracts.

Supervisor: Dr BC Dlamini

Co-supervisor: Dr EN Madala

Webb, Mbali Lomalangeni (Biotechnology) (with distinction)

Dissertation: A contribution to the biological and phytochemical studies of the South African Medicinal plant *Gunnera perpensa l*: An Ethno pharmacological study.

Supervisor: Prof DT Ndinteh

Co-supervisor: Dr VB Mavumengwana

6. Master of Science (MSc)

Da Camara, Nikita (Biochemistry)

Dissertation: Proteome analysis of isonitrosoacetophenone-treated plant systems.

Supervisor: Prof LA Piater

Co-supervisor: Prof IA Dubery

Dlamini, Mbongiseni (Chemistry) (with distinction)

Dissertation: Nanostructured materials for the removal of organic pollutants from aqueous solution: Batch and Column Studies.

Supervisor: Prof K Pillay

Co-supervisor: Prof A Maity (CSIR)

Co-supervisor: Dr M Bhaumik (CSIR)

Jones, Brandon Ray (Biochemistry)

Dissertation: Differential innate immunity to mycobacterial elicitation signalled by the vitamin D receptor pathway in monocyte/macrophages from a South African population.

Supervisor: Prof L Bornman

Khalema, Thabo (Chemistry) (with distinction)

Dissertation: Orange peels as low cost adsorbents for the removal of Pb(II) and Cd(II) from aqueous solution

Supervisor: Prof K Pillay

Co-supervisor: Prof A Maity (CSIR)

Khoza, Thembisile Glennis (Biochemistry)

Dissertation: Identification of the ergosterol-interacting proteins in the *Arabidopsis thaliana* plasma membrane.

Supervisor: Prof L Piater

Co-supervisor: Prof IA Dubery

Kiarii, Ephraim Muriithi (Chemistry) (with distinction)

Dissertation: A Density Functional Theory Study on the Modifications of Graphene Nano Sheets with Selected Metals.

Supervisor: Prof PP Govender

Co-supervisor: Prof KK Govender (Centre of High Performance Computing)

Co-supervisor: Prof PG Ndungu

Mabe, Lerato (Nanoscience)

Minor Dissertation: The use of modified multi-walled carbon nanotubes for selective removal of lead(ii) from aqueous solutions

Supervisor: Prof K Pillay

Co-supervisor: Dr N Maxakato-Dingilizwe

Madumo, Gilbert Kagiso (Chemistry)

Dissertation: Synthesis and Antimalarial Evaluation of Novel Carbohydrate fused Thiochroman derivatives.

Supervisor: Prof HH Kinfe

Mahlaka, Thabo Joel (Chemistry)

Dissertation: The Synthesis, Characterization and Kinetic Aspects of some Novel Ruthenium (II) complexes.

Supervisor: Prof R Meijboom

Masunga, Ngonidzashe (Chemistry)

Dissertation: Synthesis of mesoporous manganese, cobalt, and hybrid oxides using the inverse micelle method and their application as supports for nanoparticles and as catalysts for styrene and benzyl alcohol oxidation.

Supervisor: Prof R Meijboom

Mpelane, Siyasanga (Chemistry) (with distinction)

Dissertation: Design of palladium- conductive polymer electrocatalysts supported by graphene oxide for direct ethanol oxidation.

Supervisor: Prof M Mallick

Mudau, Rotondwa (Physics)

Dissertation: Monte Carlo simulation of neutron transport in nuclear reactors.

Supervisor: Prof A Muronga (Nelson Mandela University)

Co-supervisor: Prof SH Connell

Roberts, Kim Elli (Biochemistry)

Dissertation: Establishing metallo-porphyrin derivatives for use in photodynamic therapy in melanoma.

Supervisor: Prof M Cronjé

7. Doctor of Technology (DTech)

Jardine, Jocelyn Leonie (Biotechnology)

Thesis: Diversity and Biotechnology Applications of Thermophilic Bacteria from Hot-Spring Water in Limpopo, South Africa Relating to Wastewater Bioremediation and Water Safety

Supervisor: Dr E Ubomba-Jaswa

Co-supervisor: Dr VB Mavumengwana

Olotu, Ifeoluwa Omobolanle (Food Technology)

Thesis: Safety Assessment of Some Traditionally Fermented Foods Produced in Nigeria and South Africa.

Supervisor: Prof PB Njobeh

Co-supervisor: Dr AO Obadina (Federal University of Agriculture, Abeokuta, Nigeria)

Co-supervisor: Prof S de Saeger (Ghent University, Belgium)

8. Philosophiae Doctor (PhD)

Bingwa, Ndzondelelo Siggibo (Chemistry)

Thesis: Application of mesoporous metal oxides in catalytic oxidation reactions.

Supervisor: Prof R Meijboom

Co-supervisor: Dr M Haumann (Friedrich-Alexander University of Erlangen-Nuernberg, Germany)

Dimpe, Kgogobi Mogolodi (Chemistry)

Thesis: Preparation and characterization of carbon based adsorbents and their application for the removal of selected inorganic and organic pollutants.

Supervisor: Prof PN Nomngongo

Co-supervisor: Prof JC Ngila

Makume, Boitumelo Francinah (Chemistry)

Thesis: Studies toward furthering the understanding of selective Ethylene Oligomerisation.

Supervisor: Prof CW Holzapfel

Co-supervisor: Prof MC Maumela

Oppong, Samuel Osei-Bonsu (Chemistry)

Thesis: Metal-graphene oxide nano-composite for water treatment.

Supervisor: Prof PP Govender

Co-supervisor: Dr SK Shukla (Vinova Bhawe Research Institute, India)

Parashar, Kamyia (Chemistry)

Thesis: Synthesis and Characterisation of Metal oxide-conducting polymer nanocomposites and their application in water defluoridation.

Supervisor: Prof K Pillay

Co-supervisor: Prof A Maity (CSIR)

Umukoro, Eseoghene Helen (Chemistry)

Thesis: Photo-electrochemical application of novel carbon – metal oxides nanocomposites for the degradation of selected organic pollutants in water: Experimental and computational studies.

Supervisor: Prof OA Arotiba

Co-supervisor: Prof JC Ngila



Jardine, Jocelyn Leonie (DTech)

Jocelyn Leonie Jardine enrolled at the University of the Witwatersrand in 1983 where she completed a BSc in Microbiology and Genetics in 1985 and a BSc Honours degree in Microbiology in 1986. In 1991 she obtained an MSc degree (Med) with distinction, also from the University of the Witwatersrand. The period from 1991 to 2014 saw her working locally and internationally (United Kingdom and Canada) in a variety of positions with increasing seniority, starting as a research technician, Senior Medical Scientist and ending as Chief Research Technician. She commenced her doctoral studies in Biotechnology in 2014 at the University of Johannesburg while working as a part-time lecturer.

Hot-spring environments are valuable resources for novel and useful bacteria in biotechnology. The candidate's thesis is the first report of cultured aerobic bacteria from hot springs in South Africa (SA). Identification of bacteria was conducted using a combination of molecular tools which were useful in determining differences between the *Bacillus* and *Bacillus*-related bacteria. Emerging opportunistic pathogens with implications for water safety and public health were also isolated and identified. Bacterial isolates were also identified that produced relevant enzymes, and with biophysical properties useful for wastewater bioremediation. Extracts from these isolates were able to reduce toxic phenol concentrations caused by pollutants in dairy, textile and brewery wastewaters, as well as in river water contaminated with industrial effluent. Jocelyn, attended five conferences, won two travelling grants and was also awarded first prize for the best oral presentation at one local conference. She has published one internationally peer reviewed journal article and currently has three more in various stages of review.

Supervisor: Dr E Ubomba-Jaswa

Co-supervisor: Dr VB Mavumengwana



Olotu, Ifeoluwa Omobolanle (DTech)

Ifeoluwa Omobolanle Olotu obtained a Bachelor's degree in Food Science from the Federal University of Technology, Akure Nigeria in 2010. In 2014, she obtained an MSc degree in Food Quality at the Federal University of Agriculture, Abeokuta, Nigeria. Ifeoluwa enrolled for a DTech degree at the University of Johannesburg in March 2015, after being awarded the Organisation for Women in Science in the Developing Countries (OWSD) and GES doctoral scholarships. During her studies, she also received the L'Oréal UNESCO for Women in Science Scholarship and the African Women in Agricultural Research and Development advanced training fellowship. Ifeoluwa is married and has a son.

Ms Olotu investigated microbial contamination in fermented foods produced mainly from cereals, which is an increasingly important constraint in traditional food systems. The results indicated the high level of contamination by a wide spectrum of fungi and bacteria including new and previously unreported strains. The toxins associated with these microorganisms were also identified demonstrating that exposure of consumers to these food hazards was detectable at concentrations well above those regulated in cereal products. Solutions to mitigate the occurrence of these toxins and the associated bacteria to ensure product safety within competitive and demanding markets, were proposed. The findings contribute to the occurrence database of microbial contaminants in African foods. Ms Olotu's doctoral work resulted in four publications in international peer-reviewed journals and was presented at seven international conferences.

Supervisor: Prof PB Njobeh

Co-supervisor: Dr AO Obadina (Federal University of Agriculture, Abeokuta, Nigeria)

Co-supervisor: Prof S de Saeger (Ghent University, Belgium)



Bingwa, Ndzondelelo Siggibo (PhD)

Ndzondelelo Siggibo Bingwa was born in Khayelitsha in the Western Cape in 1990. He completed his matric at Blythwood Institution in Ngqamakhwe in 2007. He then completed BSc (Extended program) in 2011 and a BSc Honours degree in 2012 at Walter Sisulu University. Ndzondelelo joined the University of Johannesburg in 2013 to pursue his Master's degree with a project in catalysis. He completed his Masters with distinction in 2014. He then enrolled for a PhD degree at the University of Johannesburg in 2015. During his PhD he conducted some of his research at the Friedrich-Alexander-Universität Erlangen-Nürnberg in Germany. At the start of his PhD he was awarded an NRF Innovation Scholarship.

Mr Bingwa's research focused on the synthesis of reducible transition metal oxides for use as catalysts and as catalytic supports for oxidation reactions. These oxide materials were evaluated as catalysts in the oxidation of a flavonoid. The oxidation of flavonoid unearthed the oxidation reaction mechanism and reaction kinetics on the surface of the transition metal oxide catalysts. This work was extended to an industrially important selective aerobic oxidation of ethanol to acetaldehyde using transition metal oxides as catalysts and catalytic supports for platinum nanoparticles and gold-palladium nanoalloys. Mr Bingwa's work also proved that the use of ionic liquids helps fine tune selectivity patterns when applied as catalyst coating layer (SCILL catalyst). His work's contribution to the body of literature on catalysis can be seen by 3 international peer-reviewed articles. He has presented his work in 2 conferences.

Supervisor: Prof R Meijboom

Co-supervisor: Dr M Haumann (Friedrich-Alexander University of Erlangen-Nuernberg, Germany)



Dimpe, Kgogobi Mogolodi (PhD)

Kgogobi Mogolodi Dimpe was born in the North West province in 1985 and completed his matric at Letsatsing Science high school in Mahikeng (2002). In 2007 he obtained his BSc degree at the University of North-West majoring in Chemistry and Biology, he also obtained his BSc Honours degree (2009) in Chemistry at the same institution. He then came to Johannesburg to work as an intern at Mintek's Nanotechnology department. In 2012, Mr Dimpe enrolled for an MSc degree at the University of Johannesburg which he obtained in 2015. He then registered for a PhD degree in the same year fully sponsored by the NRF (Innovation Scholarship).

Mr Dimpe's research focused on the preparation and application of adsorbents from waste materials for the preconcentration and removal of selected inorganic and organic pollutants. Waste tyres were used as a carbon source to prepare activated carbon which was applied as an adsorbent and modified with various nanomaterials for water remediation. Various sample pretreatment methods were explored to maximize the extraction of metal ions and antibiotics in wastewater. His study was addressing one of the most concerning issue of waste material that eventually poses a threat to the environment. Mr Dimpe's research work answered the question "WHY WASTE WASTE". The uniqueness of his PhD work resulted in six publications in reputable, high impact factor international peer-reviewed journals with two more manuscripts currently under review. He has presented his work at five international and local conferences.

Supervisor: Prof PN Nomngongo

Co-supervisor: Prof JC Ngila



Makume, Boitumelo Francinah (PhD)

Boitumelo Francinah Makume was born on the 1st of September 1988. She completed her secondary education at Suiderlig High School (Vaal Triangle) with 7 distinctions and was awarded the Gauteng certificate of excellence (senior certificate examination). In 2009 she received a BSc degree, with distinction, from the University of Pretoria. She also received the top BSc Chemistry student award for three consecutive years. Ms Makume obtained BSc Honours degree, with distinction in 2010 from the same institution. In 2011 Boitumelo joined the University of Johannesburg where she obtained an MSc Degree (*cum laude*) in 2012. Her studies involved the development and application of homogeneous catalysis in organic synthesis. In 2013 she started work at Sasol Research and Development. In 2014, Boitumelo enrolled at University of Johannesburg for studies towards a PhD degree in Chemistry.

The candidate's research focused on the conversion of ethylene into 1-octene, an essential high value chemical in the polymer industry. Sasol developed a world acclaimed catalytic process for 1-octene production which recently resulted in commercialization on a 100k ton per annum scale. In the interest of the continued economic viability of the process, the candidate conducted extensive theoretical and empirical studies which resulted in an in-depth understanding of the underlying catalytic process. The quality of her work is confirmed by one of her examiners, a theoretical chemist of international standing, who states that "a real strength of the thesis is the meticulous analysis of the data and the interpretation of the results in terms of mechanistic understanding". Another specialist in the field of ethylene oligomerisation, observed that the candidate used "world leading methods" and that the thesis "is a definitive account of the parameters involved in catalytic efficiency". The candidate presented her work at international conferences and published in prestigious scientific journals.

Supervisor: Prof CW Holzapfel

Co-supervisor: Prof MC Maumela



Oppong, Samuel Osei-Bonsu (PhD)

Samuel Osei-Bonsu Oppong obtained a BSc degree in Physical Science from the University of the Cape Coast in 1999 and an MSc in Environmental Chemistry from Kwame Nkrumah University of Science and Technology, Ghana in 2007. He enrolled for his PhD degree at the University of Johannesburg in 2014 and is currently employed as a lecturer at the Regional Maritime University, Ghana.

Mr Oppong's research focussed on the development of novel photocatalysts through the synthesis of metal-semiconductor nanostructures, anchoring them on graphene oxide (GO) nano-sheets, and evaluating their application in the removal of organic pollutants in water. His PhD study has contributed to the synthesis of several novel photocatalysts such as Nd-doped-TiO₂-GO, La-doped-ZnO-GO and Ce-doped-ZrO₂-GO which have been used to degrade selected organic dyes into simple non-hazardous substances without any residue or sludge as by-products. The candidate presented his work at both national and international conferences with four published articles in international peer-reviewed journals.

Supervisor: Prof PP Govender

Co-supervisor: Dr SK Shukla (Vinova Bhave Research Institute, India)



Parashar, Kamyia (PhD)

Kamyia Parashar was born in Varanasi, Uttar Pradesh India in 1982. She completed her secondary education at Central Hindu Girls School in 2001 in the same region. She subsequently completed a BSc Honours Degree in Chemistry at the Banaras Hindu University, in 2005 with distinction. In 2007 she completed an MSc (Chemistry) at the Banaras Hindu University in India. She was employed as a research chemist at TCG Life Sciences, Kolkata, India in 2007. She enrolled for a PhD degree at the University of Johannesburg in 2014, and was awarded bursaries by the Water Research Commission and Faculty of Science.

Mrs Parashar's PhD study focussed on preparing and characterising novel hydrous metal oxide-conducting polymer nanocomposites and using these materials for the removal of fluoride ions from both aqueous solution and real ground water samples. Two of these nanocomposites namely a hydrous tin oxide-polypyrrole nanocomposite and a hydrous titanium oxide polypyrrole nanocomposite demonstrated high removal efficiencies and adsorption capacities for fluoride removal. Mrs. Parashar also found that hydrous zirconium oxide nanoparticles supported on polyaniline nanofibers were very effective for fluoride removal over a wide pH range. The study was novel in the sense that three different inorganic-organic hybrid nanocomposites have been developed and have shown promising potential for fluoride remediation. The candidate has published three articles in international peer-reviewed journals. A portion of this study was also presented at the Nanotech Dubai 2016 and GAMS 2016 Joint International Conferences.

Supervisor: Prof K Pillay

Co-supervisor: Prof A Maity (CSIR)



Umukoro, Eseoghene Helen (PhD)

Eseoghene Helen Umukoro hails from the Niger Delta region of Nigeria. She obtained her Bachelor and Master's degrees in Chemistry from the Obafemi Awolowo University, Ile-Ife, Nigeria. She taught chemistry at high school and university levels, and she is an Assistant Lecturer at the Department of Chemistry, Obafemi Awolowo University where she is on study leave. She enrolled for her PhD programme in the Department of Applied Chemistry in September, 2014, with the support of the Faculty of Science, University of Johannesburg.

The challenges of water scarcity and water pollution are the underlying motivation for Ms Umukoro's doctoral research. She investigated the development of cheap and novel photo-electrodes using carbon and metal oxide semiconductors for the photoelectrochemical degradation of toxic organic substances such as dyes, phenols and pharmaceutical pollutants in water treatment processes. She also looked at other aspects to unravel the reaction kinetics, mechanisms and degradation products using theoretical quantum chemical calculations. Overall her research project contributed towards sustainable environmental and water resources management using simple but efficient techniques of electrochemical/photo-electrochemical treatment of wastewaters in a photo-reactor using electrical power source and sunlight energy. The research work resulted in eight scientific articles published in high-impact, peer-reviewed international journals. Also, the findings were communicated at different local and international conferences. In addition, she was awarded the prestigious L'Oreal-UNESCO award for Women in Science (Sub-Saharan Africa) in 2016.

Supervisor: Prof OA Arotiba

Co-supervisor: Prof JC Ngila



See the back cover for the words of the National Anthem.



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