



Prof Theron is sedert 2010 Professor in die Departement Fisika van die Fakulteit Natuur- en Landbouwetenskappe, waar hy die 2 MeV- Van de Graaff-versneller gebruik vir materiaalontleding. Sy huidige navorsing is toegespits op 1) die reaksie van dun ternêre-lae, 2) om vas te stel of sekere materiale veilig is vir kerntoepassings en 3) die groei en toepassings van nano-kristallyne diamant-lae.

Na drie onsuksesvolle jare as voorgraadse student in die geesteswetenskappe (BA Teologie), het prof Theron hom gewend na Fisika as hoofstudierigting waar hy hom uiteindelik toegelê het op die gebruik van ion-bestraling om die eienskappe van vastestowwe te ondersoek, en veral op die reaksie van dun lae. Hy het die eerste *in situ* intydse Rutherford-terugverstrooiingspektrometrie (RBS)-fasiliteit ontwikkel en in 1999 op uitnodiging 'n lesing hieroor by die Ion Beam Analysis-konferensie in Dresden gelewer. Voor hy by die Universiteit van Pretoria aangesluit het, was hy vir ses jaar aan die hoof van die materiaalnavorsingsgroep van iThemba LABS, 'n fasiliteit van die NNS, en het hy ook as hoof-wetenskaplike navorser gewerk in 'n diamantnavorsingslaboratorium.

Hy is lid van die Suid-Afrikaanse Instituut vir Fisika. Hy was 'n Direkteur van die Cape Initiative for Materials in Manufacturing ('n groep wat sonder winsbejag bedryf is), en Voorsitter van die programbestuurkomitee van iThemba LABS (Gauteng) en van die gebruikersadvieskomitee van iThemba LABS (Faure). Hy was betrokke by die bedinging van samewerkingsooreenkomste met die Centre for Energy Research and Development in Nigerië, wat laasgenoemde in staat gestel het om 'n pelletron-versneller te bekom en in gebruik te stel.

Benewens sy publikasies oor intydse RBS, is die belangrikste werk wat hy gelewer het volgens hom 'n reeks publikasies oor die voorspelling van fase-vormende sekwensies in dunlaagsisteme, waarvan een meer as 100 keer aangehaal is. Hy het 'n C2-gradering van die NNS.

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Prof Theron has been a Professor in the Department of Physics of the Faculty of Natural and Agricultural Sciences since 2010, where he uses the 2 MeV Van de Graaff accelerator for studies of materials. His current research interests are in 1) the reactions of ternary thin films, 2) to establish whether specific materials are safe for use in nuclear applications and 3) the growth and applications of nano-crystalline diamond films.

After an unsuccessful three-year tour of the arts (BA Theology) as an undergraduate, Prof Theron turned to the study of Physics, focusing on the use of ion beams to characterise solids, and thin film reactions in particular. He developed the first *in situ* real-time Rutherford backscattering spectrometry (RBS) facility and lectured on this by invitation at the Ion Beam Analysis conference in Dresden (1999). Prior to joining the University of Pretoria, he headed the Materials Research Group at iThemba LABS, a national facility of the NRF, for six years and worked as a principal research scientist in a diamond research laboratory.

He is a member of the South African Institute of Physics, was a Director of the not-for-profit Cape Initiative for Materials in Manufacturing, and chaired the Programme Management Committee of iThemba LABS (Gauteng) and the Users Advisory Committee of iThemba LABS (Faure). He was instrumental in setting up collaboration with the Centre for Energy Research and Development in Nigeria, resulting in their successful acquisition and commissioning of a pelletron accelerator. Apart from publications on real-time RBS, Prof Theron considers as his most important work a range of papers on predicting phase formation sequences in thin-film systems, of which one has been cited more than a 100 times. He has a C2-rating from the NRF.

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Prof Theron o bile profesa ka Kgorong ya Fisika ka Lefapheng la Thutamahlale a Tlhago le Temo go tloga ka 2010 fao a šomišago seakgofiši sa 2 MeV Van de Graaff go nyakišiša dimetheriale. Dikgahlego tša dinyakišišo tša gagwe tša bjale di go diphetogo tša filimi ye sesane ya thenari, dimetheriale tša tšhomišo ya go bolokega ka gare ga nyuklea le difilimi tša taemane tša nano-kristalaene.

Ka morago ga mengwaga ye meraro ya go šitwa go tša bokgabo (BA ya Thutatumelo) bjalo ka moithuti wa tikrii ya mathomo, Prof Theron o ile a fetogela go ithuteng fisika, a nepile tšhomišo ya dipimi tša ayone (ion) go ba karolo ya dithatafi le diphetogo tša filimi tše itšeng. O hlamilile senolofatši sa spektrometri ya Rutherford Backscattering ya nako ya nnete ya in situ ya mathomo le go ruta ka ga se ge a laleditšwe khonferenseng ya Tšhekatsheko ya Pimi ya Ayone (ion) go la Dresden (1999). Pele a thoma go šoma UP, e be e le hlogo ya Sehlopha sa Dinyakišišo tša Dimetheriale dilaporathoring tša iThemba, senolofatši sa NRF, mengwaga ye tshela, le go šoma bjalo ka rasaense yo mogolo wa dinyakišišo ka laporathoring ya dinyakišišo tša taemane.

Ke leloko la Instištšuti ya Afrika-Borwa ya Fisika, e be e le molaodi wa Mokgatlo wa Kapa wa Dimetheriale Botšweletšing woo o sa humanego poelo, a ba modulasetulo sa Komiti ya Taolo ya Mananeo ya Dilaporathori tša iThemba (Gauteng) le Komiti ya Boeletši ya Bašomiši ya Dilaporathori tša iThemba (Faure). O bile ketapele go thomeng tšhomišano ya Senthara ya Dinyakišišo tša Enetši le Tlhabollo go la Nigeria, yeo mafelelong e bilego katlego ya thuo le morokotšo wa seakgofiši sa pheletrone. O tšea mošomo wa gagwe ka moka bjalo ka wa bohlokwa, ntle le diphatlatatšo go nako ya nnete ya RBS, molokeloke wa djampiri godimo ga go laola tatelano ya tlhamo ya kgato ka gare ga disisteme tša filimi tše di sesane, tšeo tše dingwe tša tšona di tsopotšwego makga a go feta a 100. O na le maemo a C2 go tšwa go NRF.