

Central 1

conference**series**.com 09:30-10:00

Opening Ceremony

Keynote Forum

Introduction

10:00 - 10:30

Title: Nanoclay minerals and plastics: tiny particles deliver big impact**Suprakas Sinha Ray**, Chief Research Scientist and Director, DST-CSIR National Centre for Nanostructured Materials, South Africa

Session Introduction

Track 1: Nanomaterials Particles and Applications

Track 4: Nano Electronics

Track 5: Molecular Nanotechnology

Track 9: Reinforcements in Nanotechnology

Session Chair: **Bonex W Mwakikunga**, DST/CSIR National Centre for Nano-Structured Materials, SASession Co-chair: **Annie Chimphango**, Stellenbosch University, South Africa

Session Introduction

10:30-10:55 **Title: Preparation of Au/silica/cellulose nanoparticle colloid solution and its use in X-ray imaging process**
Yoshio Kobayashi, Ibaraki University, Japan

Networking & Refreshments 10:55-11:15 @ Foyer

11:15-11:40 **Title: Polymer nanofibers for desulfurization of fuels**
Zenixole R Tshentu, Nelson Mandela Metropolitan University, South Africa11:40-12:05 **Title: Graphene and Titanium dioxide based hybrid materials as photoelectron catalytic systems**
Rodrigo Segura, Valparaiso University, Chile12:05-12:30 **Title: Nanoscale sovereignty for waste water remediation**
Shivani Bhardwaj Mishra, University of South Africa, SA12:30-12:55 **Title: Water Purification using Nanotechnology**
Arjun Maity, DST/CSIR Innovation Centre, SA12:55-13:20 **Title: Comparison of morphological properties of xylan nanohydrogels produced by enzymatic and chemical methods**
Annie Chimphango, Stellenbosch University, South Africa

Panel Discussions

Group Photo 13:20-13:25

Lunch Break 13:25-14:00 @ Foyer

14:00-14:25 **Title: Microneedles from fishscale nanocellulose blends using low temperature mechanical press method**
Olatunji Ololade, University of Lagos, Nigeria

Young Researchers Forum

Session Judge: **Martin Falk**, Institute of Biophysics of ASCR, Czech RepublicSession Judge: **Genene Tessema Mola**, University of KwaZulu-Natal, SA14:25-14:45 **Title: Looking for quantum size effects in Zr-Pb-O₂ one dimensional nanorods**
K. Kaviyarasu, University of South Africa, SA14:45-15:05 **Title: Characteristics of Colloidal Ag Nanoparticles in Polyvinyl Alcohol with Different Molecular Weight.****Bella Mellisani**, Gadjah Mada University, Yogyakarta, Indonesia.15:05-15:25 **Title: Gas Sensing Properties of VO₂ -Vanadium Dioxide Nanobelts: Strongly Correlated Materials in Low Dimension.****Aline Simo**, University of South Africa, SA15:25-15:45 **Title: Biosynthesis of NiO nanoparticles using Callistemon viminalis extracts & their potential for pseudocapacitor applications.****Bertrand Tumbain Sone**, University of the Western Cape, SA

Networking & Refreshments 15:45-16:05 @ Foyer

16:05-16:25 **Title: Sorption of NO, CO and CH₄ on Indium Phosphide Nanowires Supported with Molecular Modelling.****Sanele Nyembe**, University of Witwatersrand, SA

- 16:25-16:45** **Title: Facile method on fabrication of mixed phase bimetallic nanocomposite with high activity for electrocatalytic application**
Nolubabalo Matinise, iThemba LABS-National Research Foundation, SA
- 16:45-17:05** **Title: Application of punica granatum L functionalised bimetallic nanooxides on PVP with high catalytic activities via facile green process.**
Xolile Fuku, University of South Africa, SA
- 17:05-17:25** **Title: Iron oxide/phthalocyanine composites for electrochemical detection of heavy metals.**
Denisha Gounden, University of Kwa Zulu-Natal, SA
- 17:25-17:45** **Title: Aqueous Synthesis of Copper Sulfide Nanoparticles for Biological Applications**
Phumlani Tetyana, Mintek Nanotechnology Innovation Centre, SA
- 17:45-18:05** **Title: X-ray diffraction and band gap studies of bimetallic silver-platinum nanoparticles**
Fredrick O. Okumu, Cape Peninsula University of Technology, South Africa

Panel Discussions

Day 2 June 21, 2016

Central 1

Keynote Forum

- 09:00 - 09:30** **Introduction**
Title: The Nanowire-based Breath Analyser Technology for Disease Detection
Bonex W Mwakikunga, Principal Researcher, DST/CSIR National Centre for Nano- Structured Materials, SA
- 09:30 - 10:00** **Title: Novel Black Selective Solar Absorbers For High Temperature Concentrated Solar Power Applications**
Malik Maaza, UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology, SA

Track 2: Nanoscience & Technology

Track 3: Nano Medicine

Track 6: Nanotechnology in Energy Systems

Track 7: Emerging Areas of Nanotechnology

Track 8: Nano Applications

Session Chair: Zhypargul Abdullaeva, Kumamoto University, Japan

Session Co-Chair: Amr Tayel, The American University in Cairo, Egypt

Session Introduction

- 10:00-10:25** **Title: Solvothermal synthesis of Graphene, carbon-based Nanoparticles, Characterization, study their properties and Applications**
Zhypargul Abdullaeva, Kumamoto University, Japan
- 10:25-10:50** **Title: The mechanism of metal nanoparticle-mediated radiosensitization of tumor cells may be independent of DNA damage amplification and DNA repair inhibition**
Martin Falk, Institute of Biophysics of ASCR, Czech Republic

Networking & Refreshments 10:50-11:10 @ Foyer

- 11:10-11:35** **Title: Artificial Photosynthesis: Solar Light Driven Selective Methanol Production by CO₂ Reduction**
Young Soo Kang, Sogang University, South Korea
- 11:35-12:00** **Title: Biosensing Applications of Upconverting Lanthanide Nanophosphors**
Kelgenbaeva Zhazgul, Kumamoto University, Japan
- 12:00-12:25** **Title: Effect of solvent additives in nano-scale morphology of thin film organic solar cell**
Geneve Tessema Mola, University of KwaZulu-Natal, SA
- 12:25-12:50** **Title: Nanofluids and the Research Opportunities**
Mohsen Sharifpur, University of Pretoria, SA
- 12:50-13:15** **Title: Nanostructured LiMn₂O₄ cathode materials for efficient lithium ion battery energy storage systems**
Mesfin Abayneh Kebede, The Council for Scientific and Industrial Research(CSIR), SA

Lunch Break 13:15-13:45 @ Foyer

- 13:45-14:10** **Title: TiO₂-Graphene Oxide (GO) Nanocomposites: Synthesis, Environmental Applications and Surface Characterization using Perichromism**
Amr Mohamed Tayel, The American University in Cairo, Egypt
- 14:10-14:35** **Title: High performance supercapacitor based on 3D graphene nanocomposite**
Saleh Khamlich, iThemba LABS-National Research Foundation, SA.

Young Researchers Forum

Session Judge: Mesfin Abayneh Kebede, The Council for Scientific and Industrial Research (CSIR), SA

Session Judge: Kelgenbaeva Zhazgul, Kumamoto University, Japan

14:35-14:55 **Title: Bimetallic nanoparticles by solvothermal synthesis**

Chloë Oakland, The University of Manchester, UK

14:55-15:15 **Title: Detection of aqueous uranyl (VI) species using rare-earth upconversion nanophosphors**

Aruna Reddy, The University of Manchester, UK

15:15-15:35 **Title: Order-disorder on the nanostructures on the ocellus of the Caligo memnon (C& R elder[1867]) butterfly**

Juliet Sackey, University of South Africa, SA

15:35-15:55 **Title: Linear polyamidoamine Conjugate Containing Pamidronate and Platinum Drug: Characterization and In Vitro Cytotoxicity**

Abongile Ndamase, Tshwane University of Technology, SA

15:55-16:15 **Title: Surface modification and oxidation of vanadium thin film using femtosecond laser**

Lebogang Kotsedi, University of South Africa, SA.

Networking & Refreshments 16:15-16:35 @ Foyer

Video Presentation

16:35-16:55 **Title: Heating and melting induced by surface plasmon on a metal**

Peng-Sheng Wei, National Sun Yat-Sen University, Taiwan

16:55-17:15 **Title: AFM investigation of DNA and their interaction with MCM protein complex**

Amna Abdalla Mohammed Khalid, Trieste University, Italy

17:15-17:35 **Title : Effects of Gold Nanoparticles on Marine Species**

Maria de Lourdes Pereira, University of Aveiro, Portugal

Poster Presentations

Poster Judge: Zhympargul Abdullaeva, Kumamoto University, Japan

Poster Judge: Saleh Khamlich, iThemba LABS-National Research Foundation, SA

Title: Interconnecting Ag-NWs by argon ion beam irradiation

Shehla Honey, Nanosciences African Network, SA

Title: 3D simulations of F-N-electron emission in scanning probe lithography (SPL)

Steve Lenk, Technical university Ilmenau, Germany

Title: Covalent functionalisation of Lanthanide nanoparticles

Letitia Burgess, The University of Manchester, Manchester, UK

Title: Electrodeposited Ni Nanowires-Track Etched PET Composites As Selective Solar Absorbers

Lukhwa Rendani, University of South Africa, SA

Title: Green Biosynthesis Of Rhodium Nanoparticles Via Aspalathus

Linearis Natural Extract

Enas Ismail, University of South Africa, SA

Title: Variational formulation and solution for buckling of elastically restrained nonlocal carbon nanotubes under distributed axial loads

Mouafo Teifouet Armand Robinson, University of KwaZulu-Natal, SA

Title: Properties of the 'Laser treated tubular cobalt-alumina nanocomposite' Selective solar absorber

Angela Karoro, iThemba LABS, SA

17:35-18:15 **Title: Green Synthesis of Metal Oxides using plant extracts**

Hamza Elsayed Ahmed Mohamed, University of South Africa, SA

Title: Biosynthesis, optimisation and characterisation of gold nanoparticles using fungal extracts

Ruqsar Bibi Ismail, University of KwaZulu-Natal, SA

Title: Synthesis of ZnO nanoparticles by a green process and the characterization of their physical properties

Takalani Nethavhanani, iThemba LABS, SA

Title: Silver Nanowires Dispersed Nanofluids for Concentrated Solar Power Application

Touria Khamliche, University of South Africa, SA

Title: Green synthesis of Cerium oxide Nanoparticles by Hibiscus sabdariffa flower natural extract: Main physical properties

Zamavezi Kweyama, iThemba LABS, SA

Title: Isolation and Chemical Modification by Acetylation of Cellulose From Agricultural Waste: Hura Crepitans For Industrial Applications

Badejo Olayemi. A, Olabisi Onabanjo University, Nigeria

Title: Green synthesis and characterization of gold nanoparticles using the marine seaweed Ulva lactuca

Ofhani Christopher Mukhoro, University of the Western Cape, SA

Award & Closing Ceremony