

SAIP2023

Tuesday 04 July 2023

Poster Session 1 (15:40-17:40)

[id]	title	presenter	board
[2]	Graphene/TiO ₂ as electron transport layer to enhance energy efficiency of perovskite solar cells	Dr MALEVU, Thembinkosi	
[4]	A mechanistic non-process dependent study of the prediction and optimization of mineral beneficiation and metal extraction.	Mr MVITA, META	
[9]	A comparison study of some structural, vibrational, elastic and electron spin resonance properties of bulk- and nano-sized particles for Zn _x Co _{1-x} Fe _{2-x} Al _x O ₄ ferrite samples	Mr MASUKU, Sizwe Jackson	
[13]	Ball Milling synthesis and characterization of highly crystalline TiO ₂ -ZnO hybrids for photovoltaic applications	MALEVUTD, Thembinkosi	
[26]	Effect of Co on structural, stability and ductility of Fe ₅ Ni ₄ S ₈ (P4 ₂ /nmc): Cluster expansion method	Dr MKHONTO, Peace Prince Prof. NGOEPE, Phuti E.	
[27]	Effect of temperature on β-TiCl ₃ medium	Ms MAZIBUKO, Andile	
[36]	THE CATALYTIC ACTIVITY OF MO ₂ (M= Ti, V, Mn) ON (110) SURFACE OF Na-AIR BATTERY	NGOBENI, PERCY	
[38]	Probing the Stability of Nickel Titanium Surfaces for Oxygen Adsorption: A DFT Study	CHAUKE, vukosi	
[40]	The Minimal load potential of elastic membranes	MOHAMMADI, Seyyed Abbas	
[56]	Binding nature of fibrin molecules on to Au ₉₂ and Ag ₉₂ nanoparticles	MAKGOBA, Malesela Walter	
[64]	Computer simulation of Silver (Ag) and Nickel (Ni) Nanomaterials	MATSHABA, Malili	
[70]	Effect of Gd ³⁺ moles on the structure, morphology and luminescence properties of BaAl ₂ O ₄ :x% Gd ³⁺ (0 ≤ x ≤ 1) nanomaterial prepared using a sol-gel method.	Dr MHLONGO, Rebecca	
[72]	Reactive molecular dynamics simulations of the atomic oxygen impact on Poly(2,5-benzimidazole)	ELLIS, Ernst	
[76]	Electronic, elastic and thermoelectric properties of hexagonal CuSe phase	Ms RAMOSHABA, MOSHIBUDI	
[81]	Structural Changes of LiXCo ₂ O ₄ (1 ≤ x ≤ 2) Nanoporous Cathode Materials upon Lithiation	BEAUTY, Shibiri	
[92]	Computational and Experimental Studies on Mn-rich LiMn _{1.5} Ni _{0.5} O ₂ Cathode Material	Mr KGOEDI, Moloko	
[100]	Synthesis and CO gas sensing applications of two-dimensional hexagonal boron nitride nanosheets at different temperatures	Mr KEKANA, MAGOPA TSHEPHO MCDONALD	
[102]	Development of TiO ₂ nanotube arrays with a modified energy band gap for hydrogen evolution	MUTUBUKI, Arnold	

[110] Optimization of multi-walled carbon nanotubes for improved heat transfer	MASOLO, hlabane Beauty	
[113] Confocal Raman and AFM Characterization of Mesoporous Titania Electrode Substrates for Perovskite Solar Cell Applications	Dr AHIA, Chinedu Christian	
[114] Intrinsic defect interactions in a monolayer silicene: An ab-initio DFT study	MABOE, Paul	
[122] Investigation of the fundamental interactions of the PtSb₂ Surface with the MBTK molecule	Mr NDHLOVU, ivyn	
[123] Thermal conductivity enhancement in gold decorated graphene nanosheets in ethylene glycol based nanofluid	Dr MBAMBO, Makhangele	
[126] V₂O₅ nanostructures for gas sensing: doping, and low temperature detection of Methanol, Ethanol and NO₂ with superior response of H₂S	MOKWENA, Mick Molukie	
[127] Cluster expansion calculations on the discharge product of magnesium-ion batteries	TIBANE, KHUMBULANI	
[131] Investigation of the structural, elastic and vibrational stability of PtTe, PtTe₂, Pt₂Te₃ and Pt₃Te₄ tellurides structures	MAAKA, TSHEPO	
[156] First principle study of structural and thermodynamic stability of ternary NaVSe₂	Dr TSHWANE, DAVID	
[134] Phase stability of calcium manganese oxide (CaMn₂O₄) polymorphs cathode materials in calcium ion batteries.	Mr ROBERTS, OSWALD	
[142] Incorporation of copper nanorods in organic solar cells	SEIMELA, Thapelo	
[148] Effects of defects on gas sensor performance of β-Ga₂O₃	GATSI, Nyepudzai Charsline	
[163] Structural, Electronic, Mechanical and Thermodynamic Properties of Ternary NaVS₂: DFT Study	MOGAKANE, LETHABO	
[165] First principles study of structural, elastic, electronic and optical properties of triclinic CsAlS₂ chalcogenide.	Mr PHALE, Boitemogelo	
[168] Optimization of deposition voltage for growth of CdZrS thin films for window layer of CdTe-based solar cell device application.	MOHAPI, TSHEPO KARABO WILLIAM	
[186] Self-Consistent Charge Density-Functional Tight-Binding Parameterization for the Mg-Si system	Dr PHOSHOKO, Katlego	
[226] 2D/3D heterojunction of MAPbI₃/OA₂PbI₄ thin films for Photovoltaic Hydrogen Evolution	THUBANE, Sandile	
[228] The structural, electronic and dynamical properties of pyrite-type minerals: DFT and Atomistic Simulations.	MEHLAPE, Mofuti	
[232] High selective and sensitive acetone gas sensor: Effects of Cerium metal ion on pyramid-like In₂O₃ products	KGOMO, Mosima	
[235] Electronic Stability and Surface Study of Tin Dioxide	MAENETJA, khomotso	
[241] Investigating the effect of sodium partial substitution on nanostructured Li₂MnO₃ cathodes during the simulated charge process	Mrs MOGASHOA, Tshidi	
[242] Improve physical properties of rare earth metal doped strontium sulphide for optoelectronic purpose	Mr SHAKA, Samuel	
[252] Computational studies of optoelectronic properties of CH₃NH₃PbI₃ as a photolayer in perovskite solar cell	RUGUT, Elkana	
[276] Microstructure and strain dependence on growth time of hydrothermally synthesized nanocrystalline porous sodalite	KITEME, KYALO Ngesu	
[279] STUDY OF THE IMMOBILISATION OF PALLADIUM BY SILICON AND ZIRCONIUM IN GRAPHITE.	Mr MTWAZANA, GCOBANI	

[297] Overview of Ion Beam Analysis (IBA) activities at iThemba LABS-NRF	NKOSI, Mlungisi	
[309] Structural, elastic, electronic, bonding, and optical properties of PtBiTe and PtBi₂ structures.	MULAUDZI, Masilu Godfrey	
[310] Synthesis and Characterization of Ti₃C₂ MXene electrode via In-situ HF and direct HF etching methods for application in battery-supercapacitor hybrid devices.	TALANE, Tsholo	
[312] Characterization of neutron-induced defects in SnO₂ using positron annihilation technique	Ms MOTJOPE, Dineo	
[319] Li adsorption on a self-healed graphane for the next generation ion batteries.	Dr MAPASHA, Edwin	
[321] Analysis of green emitting Tb³⁺ activated BaAl₂O₄/CaAl₂O₄/AlHO₂/Tb₂O₃/TbAlO₃ mixed phases nanophosphors prepared via citrate sol-gel method	BELE, ABONGILE	
[326] A study of thermal response of chromium-tin (Cr-Sn) bimetal films using in-situ RBS by Artificial Neural Networks	SEGOLA, Ingrid	
[327] Magnesium-Silicon Alloy Phase Stability Predictions: A cluster expansion study.	Dr PHOSHOKO, Katlego	
[329] Optimization of electron transport layer in polymer solar cell	NTOBENG, Modisa	
[338] Investigation of reduced graphene oxide as an alternative carbonaceous material for lithium ion batteries: A density functional theory study	Mr MLOTSHWA, Thokozane Mxolisi	
[343] Chemical Trends in defect stability and electronic properties of 3d transition metal doped WS₂	NYANDORO, Brian	
[346] Microstructural characterization of low elastic modulus β-Ti alloy fabricated by arc melting process	MADIGOE, Mandy	
[347] Gas sensing properties of rare-earth substituted MgFe₂O₄ ferrite nanoparticles	MKWAE, Prince	
[35] Influence of rare-earth elements (RE = Ce, Nd, Gd) on Structural, ESR and Mössbauer spectroscopy studies of Ni_{0.5}Co_{0.5}RE_{0.03}Fe_{0.197}O₄ synthesized by glycol-thermal method	Dr NHLAPO, T. A	
[174] Proton beam and femtosecond laser writing lithography method for semiconductor microstructures	Mr GUGA, Aluwani	
[198] Understanding the origin of Bunny-Hop light curves of periodic methanol masers	NEL, Andrea	
[116] Combining large radio and optical astronomical surveys: exploring the MeerKAT Galaxy Cluster Legacy Survey	Mr NEL, S.J.J.	