

SAIP2022

Monday 04 July 2022

Physics of Condensed Matter and Materials - Zoom Platform (11:30-13:00)

-Conveners: Rudolph Erasmus

time	[id] title	presenter
11:30	[287] Lattice expansion studies of the crystal structure transformation in intermediate valent $\text{Ce}_{2}\text{Rh}_{2}\text{Ga}$	XHAKAZA, sindisiwe
11:45	[311] Property and structural characterisation of Fe and Ni bonded NbC cermets for improved tribological applications	PETERS, Gerrard
12:00	[117] Thermal stability of diketopyrrolopyrrole-based terpolymers with tunable broad band absorption for polymer solar cells.	Mr NCHINDA, Leonato Tambua
12:15	[106] Synthesis and modification of Boron Nitride nanotubes using ion implantation	Mr LISEMA, Lehlohonolo
12:30	[118] Highly methane responsive nanosensor layer based on mesoporous nanostructured belts-like Indium Oxide	KGOMO, Mosima
12:45	[278] Electrochemical Synthesis and Characterization of PANI/Graphene-foam Composite Films	Mr CHILUKUSHA, Daniel

Physics of Condensed Matter and Materials - Zoom Platform (15:00-16:30)

-Conveners: Clifton Masedi

time	[id] title	presenter
15:00	[123] Phase Stability of $\text{Li}_2\text{Mn}_{1-x}\text{TM}_x\text{O}_3$ (TM= Ni, Co, Cr and Ru) Cathode Material Using Cluster Expansion and Monte Carlo Simulations	MPHAHLELE, Mamonamane
15:15	[174] DEVELOPMENT OF MACHINE LEARNING MODELS FOR PREDICTING ENERGIES OF SODIUM-ION BATTERY MATERIALS	Ms MONARENG, Keletso
15:30	[220] The phase stability, mechanical and electronic properties of CsCl-type intermetallic: TiTM (TM = Ni, Ru and Pd), a first-principles approach	NGOBE, Bongani
15:45	[262] Effect of Mn addition on the ductility of FeCo soft magnetic alloy	LEDWABA, Tebogo
16:00	[171] Ab initio and Cluster Expansion study on Magnesium Spinel (MgX_2Z_4 : where X=Sc, Y and In; Z=S and Se)	TIBANE, KHUMBULANI
16:15	[252] The effects carbon and boron on the T-MnAl alloy properties employing the first principle approach.	SEBE, ITUMELENG

Tuesday 05 July 2022

Physics of Condensed Matter and Materials - Zoom Platform (11:30-13:00)

-Conveners: Daniel Wamwangi

time	[id] title	presenter
11:30	[34] Characterization of defects in Ar+ implanted ZnO semiconductor using positron annihilation technique.	Mr KHULU, Musawenkosi
11:45	[177] Magnetocaloric effect in Dy based chromium oxides	SIBANDA, Eugene
12:00	[185] Effect of solvents on the extraction and absorption study of natural dye from Bidens pilosa for dye sensitized solar cells	Mrs RANDELA, Ronel Ronella
12:15	[277] Synthesis of copper nanowires for application as flexible transparent conducting electrodes	Mr HOY, Nicholas
12:30	[190] Preparation and characterization of porous ZnFe ₂ O ₄ hollow fibers with enhanced sensing response and selective detection of acetone	NEMUFULWI, Murendeni
12:45	[165] Impact of rapid thermal annealing on the properties of different Ag layer thicknesses Ag/ITO bilayer films	Mr OLLOTU, Emmanuel Rasiel

Physics of Condensed Matter and Materials - Zoom Platform (15:00-16:30)

-Conveners: Ramogohlo Diale

time	[id] title	presenter
15:00	[9] First-principles study on interaction of O ₂ with (100) surfaces of sperrylite and platarsite minerals	NEMUTUDI, Bradley Mr NEMUTUDI, BRADLEY
15:15	[306] Study of inorganic lead halide perovskites properties using density functional theory for photovoltaic and optoelectronic devices	MALEKA, Prettier Morongoa
15:30	[213] Ground state phase stability simulation of Fe-X-Al alloys (X= Pd and Ag)	Ms MKHONTO, Chrestinah
15:45	[275] Ab-initio study of hydrofluoric acid and ethylene carbonate adsorption on the Nb-doped on the LiMn ₂ O ₄ surfaces	Mr RAMOGAYANA, Brian
16:00	[238] Machine Learned Buckingham Interatomic Potentials for Co-doped Li-Mn-O spinel.	HLUNGWANI, DONALD
16:15	[250] Evaluating the small Ti ₇ cluster in α -TiCl ₃ medium	Ms MAZIBUKO, Andile

Thursday 07 July 2022

Physics of Condensed Matter and Materials - Zoom Platform (11:30-13:00)

-Conveners: BHARATI BAMANA

time	[id] title	presenter
11:30	[168] Structural and magnetic properties of $\text{Co}_x\text{Ni}_{1-x}\text{Cr}_2\text{O}_4$ ($x = 0.75, 0.80, 0.85$) nanoparticles	JACOB, Mariam
11:45	[183] Structural and magnetic properties of $\text{Co}_{1-x}\text{Cu}_x\text{Cr}_2\text{O}_4$ nanoparticles	Ms NAGARAJ, Shobana
12:00	[196] Synthesis, Structural, and Magnetic Properties of $\text{CoCr}_2\text{O}_4/\text{Cu}_2\text{O}$ nanocomposites.	NKOSI, Thabang Johannes Mr NKOSI, Thabang Johannes
12:15	[46] TRANSITION METAL CARBONATE PRECURSORS AS CATHODE MATERIALS FOR LI-ION BATTERIES: COMPUTATIONAL AND EXPERIMENTAL STUDY	Ms MORUKULADI, Mogahabo
12:30	[259] Investigating sodium incorporated Li_2MnO_3 nanostructured cathodes for lithium-ion batteries	Mrs MOGASHOA, Tshidi
12:45	[302] SIMULATIONS SYNTHESIS OF $\text{Na}_{0.23}\text{TiO}_2$ NANOSPHERE AT VARIED TEMPERATURES: BEYOND LI-ION BATTERIES.	Ms RIKHOTSO, Blessing

Physics of Condensed Matter and Materials - Zoom Platform (15:00-16:30)

-Conveners: Rudolph Erasmus

time	[id] title	presenter
15:00	[130] Structural and optical properties of TiO_2 photoelectrodes fabricated for photoelectrochemical water splitting	Dr SULIALI, Nyasha
15:15	[198] Structural and Magnetic Study of NdCrTiO_5 Nanoparticles	BAMANA, BHARATI
15:30	[206] FIRST-PRINCIPLE STUDIES OF CUBIC Ti_2AlV AND TETRAGONAL TiAl_2V STRUCTURAL STABILITY	MODIBA, Rosinah
15:45	[229] Magnetic Phase Transitions in Ce^{3+} Substituted CoCr_2O_4 Nanoparticles	MOHANTY, PANKAJ
16:00	[231] Impact of Cr substitution on magnetic properties of cobalt-doped ZnO nanoparticles	Dr HANDALAGERE SHANKARAPPA, Lokesha
16:15	[135] Phase stability prediction of mixed $\text{Li}_2\text{S}_{1-x}\text{Se}_x$ system	MASEDI, Cliffton

Friday 08 July 2022

Physics of Condensed Matter and Materials - Zoom Platform (11:30-13:00)

-Conveners: Thulani Jili

time	[id] title	presenter
11:30	[55] Non-Specialist Lecture: Neutron scattering prospects at the new Multi-Purpose Reactor	KESHAW, Jeetesh
12:00	[181] Thermal conductivity of Chalcogenides Alloys: Energy and information storage applications	WAMWANGI, Daniel
12:15	[79] Media Structured for Nonlinear Optics	TAVARES BUONO, Wagner
12:30	[317] TEM OBSERVATION of ROOM TEMPERATURE STABILITY AND PHASE TRANSFORMATION OF SHI INDUCED TETRAGONAL TRACKS IN MONOCLINIC ZIRCONIA	Prof. LEE, Michael
12:45	[337] Machine Learning Structure-Property Model for Carbon Steels	Dr WESTRAADT, Johan