



# SAIP 2011

## Wednesday 13 July 2011

### CMPMS1: PhD For Awards 1 - Parthenon (11:00-12:45)

**-Conveners: Japie Engelbrecht**

time	[id] title	presenter
11:15	[10] Studies of thermodynamic, structural and electronic properties of substitutional defects in models of single-walled carbon and boron nitride nanotubes	Mr MASHAPA, Matete
11:30	[47] Investigation of broken symmetry of Sb/Cu(111) surface alloys by VT- STM	Mr NDLOVU, Gebhu
11:45	[50] The decoration of vicinal copper polycrystalline surfaces by Antimony	Mr NDLOVU, Gebhu
12:00	[93] Modification of the bandoffset in boronitrene	Mr OBODO, Kingsley
12:15	[95] Black Cr/ $\alpha$ -Cr <sub>2</sub> O <sub>3</sub> Nanoparticles Based Solar Absorbers: Growth Kinetic	Mr KHAMLICH, Saleh
12:30	[222] Tuning Carbon Nanotubes for Application in Photovoltaic Devices	Mr BEPETE, George

### CMPMS1: PhD For Awards 2 - Parthenon (13:45-15:30)

**-Conveners: Jonathan Keartland**

time	[id] title	presenter
13:45	[101] Theoretical study on possible structures for crystalline silicon dicarbide	Mr ANDREW, Richard
14:00	[117] Thermodynamic Properties and Inelastic Neutron Scattering of Ferromagnetic CeCuSi	Ms SONDEZI-MHLUNGU, Buyi
14:15	[122] Reversible Semiconductor – Metal Transition study in nano-FePt system	Mr NKOSI, Steven
14:30	[147] Blended thin films of tris-(8-hydroxyquinoline) aluminium (Alq <sub>3</sub> ) embedded in polymethyl methacrylate (PMMA) and polystyrene (PS).	Ms DUVENHAGE, Mart-Mari
14:45	[181] The Magnetocaloric Effect in Ferromagnetic PrSi: Evidence of a Novel Magnetic Ground State and Higher Order Exchange Interactions	Mr SNYMAN, Jasper Snyman
15:00	[188] Low voltage electron beam induced degradation and surface chemical changes of Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> :Tb phosphor	Dr NAGPURE, I M

# Thursday 14 July 2011

## CMPMS1: PhD For Awards 3 - Parthenon (08:00-09:30)

**-Conveners: Johan Malherbe**

time	[id] title	presenter
08:00	[217] Isochronal annealing of argon ion bombarded GaAs with Raman and surface Brillouin scattering	Mr JAKATA, Kudakwashe
08:15	[229] Nitrogen-vacancy in diamond for Solid-state quantum computing	Mr ZULU, Bheki
08:30	[238] Brillouin scattering study of TiC hard films	Mr SUMANYA, Clemence
08:45	[240] Pulsed laser deposition of multiwall carbon nanotube/NiO nanocomposite thin films	Mr YALISI, Brian
09:00	[279] Enhanced green emission from UV down-converting Ce <sup>3+</sup> -Tb <sup>3+</sup> co-activated ZnAl <sub>2</sub> O <sub>4</sub> phosphor	Mr TSHABALALA, Kamohelo George

## CMPMS1: PhD For Awards 4 - Parthenon (11:00-12:45)

**-Conveners: Joseph Asante**

time	[id] title	presenter
11:00	[299] Temperature dependent I-V characteristics of Sulphur passivated Au/n-GaSb Schottky barrier diodes	Mr MURAPE, Davison Munyaadzi
11:15	[335] Energetic stability and charge states of 3d transition metals in diamond: Towards a diamond based diluted magnetic semiconductor	Mr BENECHA, Evans
11:30	[360] Nanostructured WO <sub>3</sub> thin films by Aqueous Chemical Growth: Structural, Optical and Gas sensing characteristics	Mr SONE, Bertrand
11:45	[376] Vibrational properties of Mass produced graphene monolayer by chemical method	Mr KHENFOUCH, MOHAMMED
12:00	[388] Effects of ZnO and Ce <sup>3+</sup> incorporation on the photoluminescence and cathodoluminescence intensity of Pr <sup>3+</sup> doped SiO <sub>2</sub> .	Ms MHLONGO, Gugu
12:15	[405] ZnO Nanorods/Nanoplates for Gratzel-Type Dye Solar Cells Applications: Growth Mechanism	Mr SITHOLE, Joseph

## CMPMS1 - Parthenon (13:45-14:30)

**-Conveners: Francis Dejene**

time	[id] title	presenter
13:45	[99] Intermediate valence and antiferromagnetic Kondo lattice behaviour in Ce(Au <sub>1-x</sub> Ni <sub>x</sub> ) <sub>2</sub> Si <sub>2</sub> .	Prof. TCHOULA TCHOKONTE, Moise Bertin
14:00	[9] On the orbital rehybridization in tetrahedral amorphous carbon	Dr UKPONG, Aniekan Magnus
14:15	[45] Germanium-Carbide Formation on Crystal Germanium Substrate	Dr MOLA, Genene Tessema

# Friday 15 July 2011

## CMPMS1 - Parthenon (08:00-09:30)

**-Conveners: Aletta Prinsloo**

time	[id] title	presenter
08:00	[62] Nanoscale manipulatation of lamellar copolymers using electric fields.	Dr MKHONTA, Simiso
08:15	[64] Solution-processed CuSe Quantum Dots Photovoltaics	Dr MOLOTO, Nosipho
08:30	[97] Assessment of glassy carbon as a high-level nuclear waste containment material	Prof. MALHERBE, Johan
08:45	[121] Monte Carlo Simulations of Magnetite Nanoparticles Stabilised With Sebaccic Acid and 1, 10-Decanediol Surfactants	Dr HARRIS, Richard
09:00	[124] Characterization of nitrogen-doped carbon nanospheres using electron magnetic resonance	Dr KEARTLAND, Jonathan
09:15	[153] The electric field gradient in mercuric chloride	Dr KEARTLAND, Jonathan

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