

**Programme for Chemical Engineering and Advanced Materials Postgraduate  
Conference**

**Friday 3 June 2016**

09.00 – 09.20: Registration, posters up, Tea, Coffee and pastries

09.20 - 09.30: Opening speech by HoS

09.30 – 09.55: Keynote speaker  
Prof Suzanne Cholerton, Pro-Vice-Chancellor, Learning & Teaching

Presentations start at 10.00

Presentations to be held in 2.21 and 2.22

Posters in 2.20

**Presentations to be held in room 2.21 are as follows**

<b>Session 1: Dr Novakovic &amp; Dr Yu</b>		
Time	Name & Title	Page
10.00	<b>Hassan Izadi Gonabadi</b> <i>Fatigue Performance of Composite Tidal Turbine Blades</i>	31
10.20	<b>Mohammed Kadhim</b> <i>Porous PolyHIPE's as Filters for Water Treatment</i>	32
10.40	<b>Pengfei Duan</b> <i>Nanomechanical analysis of biocomposite materials: from both experimental and modelling perspectives</i>	33
11.00	<b>Murhamdilah Morni</b> <i>Understanding the Mechanical Response of Highly Porous Polymer Materials</i>	34
11.20	<b>Silas Mulaudzi</b> <i>An assessment of the potential of Solar Photovoltaic (PV) and hybrid renewable energy application in South Africa</i>	35
11.40	<b>Khalil Hassan</b> <i>Reinforcement of Silica Aerogels synthesised by Novel Ambient Pressure Drying Method</i>	36

**12.00 – 12.50: Buffet lunch, refreshments and poster viewing**

<b>Session 2: Dr Ofiteru &amp; Dr Olla</b>		
12.50	<b>Mike Pugh</b> <i>Susceptibility to Stress Corrosion Cracking and Hydrogen Embrittlement of Stainless Steel Nuclear Fuel Pin Cladding</i>	37
13.10	<b>Jennifer Nwosu</b> <i>Oxidative carbonylation of alkyne functionalised poly (ethylene) glycol in oscillatory modes</i>	38
13.30	<b>Laura Díaz Silvarrey</b> <i>Monomer recovery of waste high density polyethylene by non-thermal plasma assisted pyrolysis</i>	39
13.50	<b>Jonathan Harris</b> <i>Investigating non-thermal plasma assisted upgrading bio-oil model compounds</i>	40
14.10	<b>Tobechi Okoroafor</b> <i>New Pathways for Producing Chemicals from CO<sub>2</sub> using Bioelectrochemical Systems</i>	41

**14.30 – 14.50: Tea and Coffee break and poster viewing**

<b>Session 3: Dr Velasquez-Orta &amp; Dr von Stoch</b>		
14.50	<b>Fahad Al-Kalbani</b> <i>Active Disturbance Rejection Control on Heat Integration Distillation Column</i>	42
15:10	<b>Sulaiman lawal</b> <i>Sensor Fault Detection and Fault Tolerant Inferential Control of a Crude Distillation Unit</i>	43
15:30	<b>Fei li</b> <i>Controllability analysis and control system design for a post-combustion CO<sub>2</sub> capture plant based on centralized and decentralized control techniques</i>	44
15:50	<b>Wissam Muhsin</b> <i>Modelling and Optimisation of a Crude Oil Hydrotreating Process Using Neural Networks</i>	45
16.10	<b>Swee Su Lim</b> <i>Optimisation of Full Biological Dual-chamber Microbial Electrolysis Cells</i>	46

16.30 Closing remarks in 2.21

Presentation sessions to be held in room 2.22 are as follows:

<b>Session 1: Dr Zivkovic &amp; Dr Russo Abegao</b>		
Time	Name & Title	Page
10.00	<b>Safaa Ahmed</b> <i>Scale-up of oscillatory helically baffled reactors (OHBRs)</i>	47
10.20	<b>Ahmed Al Hatrooshi</b> <i>Marine Waste Biorefinery</i>	48
10.40	<b>Faiz Gunam Resul</b> <i>Investigating non-thermal plasma assisted upgrading bio-oil model compounds</i>	49
11.00	<b>Akeem Babatunde</b> <i>In Situ Transesterification of Rapeseed for Biodiesel Production</i>	50
11.20	<b>Jonathan McDonough</b> <i>Isothermalisation: Passive temperature flattening of an exothermic reaction using a Heat Pipe Oscillatory Baffled Reactor (HPOBR)</i>	51
11.40	<b>Abdul Rehman</b> <i>Cyclic carbonates synthesis from CO<sub>2</sub> and terpene-based epoxides as intermediates for the production of bio-based polymers</i>	52

**12.00 – 12.50: Buffet lunch, refreshments and poster viewing**

<b>Session – 2 Dr Zivkovic &amp; Dr Valentine</b>		
12.50	<b>Muayad Al-Karawi</b> <i>Drainage enhancement in the continuous foam flotation column used for algae biomass recovery</i>	53
13.10	<b>Abbas Umar</b> <i>Using Sodium Dodecylsulphate and Foam Column Separation to remove Ciliates from Microalage Culture</i>	54
13.30	<b>Chukwuma Anyigor</b> <i>Monetization of Stranded Natural Gas – Natural Gas Hydrate Pathway</i>	55
13.50	<b>Toluwanimi Kolawole</b> <i>Capturing carbon dioxide with aqueous monoethanolamine solutions in a rotating packed bed</i>	56
14.10	<b>Halim Bin Md Ali</b> <i>In-Situ FTIR Studies of the Plasma Glow Region of Non-Thermal Plasmas</i>	57

**14.30 – 14.50: Tea and Coffee break and poster viewing**

<b>Session – 3: Dr Oila &amp; Dr Zhang</b>		
14.50	<b>Tarik Gerardin</b> <i>Ag-Fe<sub>2</sub>O<sub>3</sub> hybrid material: Synthesis and Temperature programmed reduction/oxidation experiments</i>	58
15.10	<b>Yuhao Ji</b> <i>Perovskite-carbonates dual phase membranes for high temperature CO<sub>2</sub> separation</i>	59
15.30	<b>Sotiria Tsochataridou</b> <i>Model inorganic-carbonate membranes for high temperature carbon dioxide separation</i>	60
15.50	<b>Wan Khairunnisa Binti Wan Ramli</b> <i>Exsolved NiCo nanoparticles as potential catalysts for CO and NO oxidation</i>	61
16.10	<b>Danny Mak</b> <i>Hydrogen Production by using Iron-Oxide Perovskite Composite Material via Chemical Looping</i>	62

16.30 Closing remarks in 2.21