

SUNDAY 11 NOVEMBER	
16:00 - 18:30	Registration
17:00	Student challenge
18:30 - 23:30	Mixer

MONDAY 12 NOVEMBER	
06:00 - 08:00	Breakfast Venue: Monomotapa
07:15	Registration
07:50	Opening
Chair: Prof. R.J. Kriek	
08:00	PL 01 Degradation of Nanoscopic and Bulk Platinum Electrocatalysts <u>G. Jerkiewicz</u>
	Plenary
08:40	OP 01 Electronic effects of N-heterocyclic carbene ligands on the catalytic activity of half-sandwich Ni(II) complexes <u>F. P. Malan</u> , E. Singleton, P. H. van Rooyen, J. Conradie, and M. Landman
09:00	OP 02 Hollow carbon spheres as a durable platinum catalyst support in fuel cells <u>V. Mashindi</u> , N. Coville and K. Ozoemena



TUESDAY 13 NOVEMBER	
06:00 - 08:00	Breakfast Venue: Monomotapa
07:30	Registration
Chair: Prof. N. Fischer	
08:00	PL 02 New light through old windows – A Fischer-Tropsch catalysis journey <u>P. Gibson</u>
	Plenary
08:40	OP 16 Phase and structural changes of nickel catalysts as a function of reaction conditions <u>D.de Oliveira</u> , N. Fischer, M. Wolf and M. Claeys
09:00	OP 17 Optimising the Pt_xNi_yAl_z ratio as thin film electrocatalyst for the oxygen evolution reaction (OER) in alkaline medium <u>H.K. Kishinkwa</u> , A. Falch, R.J. Kriek

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WEDNESDAY 14 NOVEMBER	
06:00 - 08:00	Breakfast Venue: Monomotapa
07:30	Registration
Chair: Prof. J. Darkwa	
08:10	KL 05 Supported liquid metals – a new class of robust dehydrogenation catalysts N. Taccardi, M. Grabau, J. Debuschewitz, M. Distaso, M. Brandl, R. Hock, F. Maier, C. Papp, J. Erhard, C. Neiss, W. Peukert, A. Görling, <u>M. Haumann</u> , H.-P. Steinrück and P. Wasserscheid
	Keynote
08:40	OP 26 The development of non-heme N₄ tetradentate ligated Mn(OTf)₂ complexes for the investigation of catalytic alcohol oxidation <u>V. Vermaak</u> , A.J. Swarts, D.A. Young
09:00	OP 27 Preparation of Single-Platinum Atoms on MFI Zeolite Catalyst for Hydrocracking of Fischer-Tropsch Wax <u>A. Delo</u> and P.J. Kooyman

09:20	OP 03 ZIF-8 and NH₂-MIL-53(AI) As Support For Pd and Ag Crystallites with Application in Heterogeneous Catalysis R. Mogale and E. H.G. Langner	
09:40	OP 04 Model systems for the investigation of metal support interactions for cobalt based Fischer Tropsch N. Dyasi, G. Leteba, L. Macheli, and E. van Steen	
10:00	Tea	
Chair: Prof. G. Jerkiewicz		
10:30	KL 01 Measuring the Particle size of Silica support Using the Laser scattering technique S.G.E. de Jager, T. Botha	Keynote
11:00	OP 05 The deposition of metal oxides onto activated charcoal as a means of enhancing the reactive adsorption of thiophene compounds in diesel T. Nkomzwayo, Y.Yao, X. Liu and D. Hildebrandt	
11:20	OP 06 Electrochemical Activity of Pt-Pd supported on carbon xerogels towards the oxygen reduction reaction L. Ndzuzo, J.C.C. Gomez, V. Linkov and S. Pasupathi	
11:40	OP 07 Synthesis of Organometallic Rh(I) Complexes and Their Application as Pre-Catalysts in the Aqueous Biphase Hydroformylation of Higher Olefins B. Davids, E. Mmutlane and B. Makhubela	
12:00	OP 08 Deactivation of PtCo/Al₂O₃ at high Fischer-Tropsch conversion for simulated small scale on- through reactor configuration C. Tucker, E. van Steen	
12:20	OP 09 Pechini sol-gel synthesis and photoelectrochemical water splitting of a nickel tellurium oxide photoanode M.Z. Iqbal, R.J. Kriek	
12:40	Lunch Venue: Monomotapa	
Chair: Prof. H. Freidrich		
14:00	KL 02 Fundamentals of Methane Oxidation over Palladium Oxide: A Computation Study J. Mugo, H. Chuma and G. Jones	Keynote

09:20	OP 18 Bimetal tetracyanonickelates used as a heterogeneous catalyst M.R. Sebitlo and E. Erasmus	
09:40	OP 19 CFD Simulation of A Bench Scale Fixed Bed Fischer-Tropsch Synthesis Reactor J. Shen, X.Liua, W.H. Hob, D. Hildebrandta	
10:00	Tea	
Chair: Mr. S. Roberts		
10:30	OP 20 Solution Combustion Catalysts for the Water-Gas Shift Reaction M.W. van der Merwe, J.V. Fletcher, N.T.J. Luchters, J.C.Q. Fletcher, P.J. Kooyma, and S. Specchia	
10:50	OP 21 Synthesis of carbon supported IrO₂ catalyst for the Oxygen Evolution Reaction T. Labi, J. Chamier and F. Van Schalkwyk	
11:10	KL 04 Tandem transfer hydrogenation-epoxidation of ketone substrates catalysed by Ru(II)-NHC catalysts M. Landman, F.P. Malan, E. Singleton and P. H. van Rooyen	Keynote
11:40	CATSA AGM	
12:40	Lunch Venue: Monomotapa	

09:20	OP 28 Cobalt Supported on Reduced Graphene Oxide as Catalyst for the Hydroformylation of Ethylene with Syngas J. Chang, X. Liu, D. Hildebrandt	
09:40	OP 29 Sol-gel Synthesis of Ce_{0.8}Sr_{0.2}Co_{0.6}Ni_{0.2}Fe_{0.2}O_{3-δ} – A Perovskite Type Electrocatalyst for the Oxygen Evolution Reaction in Alkaline Media C.B. Njoku, R.J. Kriek	
10:00	Tea	
Chair: Prof. N. Coville		
10:30	OP 30 The performance of C₂H₄ on typical Fischer-Tropsch TiO₂ supported cobalt catalyst with co-feeding of H₂ and syngas Y. Zhang, X. Liu, Y. Yao, D. Hildebrandt	
10:50	OP 31 A comparison of the use of the Weisz-Prater criterion to the experimental measurement of the internal effectiveness factor under low-temperature water-gas shift conditions. D. Kruger, S. Roberts, J. Fletcher	
11:10	OP 32 Graphene-based nanostructural materials: Next generation catalysts? J. Moma, and N. Coville	
11:30	OP 33 The effect of support pore diameter and Mn loading on catalyst selectivity for Co/Mn-Ti/alumina catalysts. J.H. Potgieter, T. Botha, D.Moodley, T. Manong, J. Davel, L. Ngondwana, A. Cullen, M. Hauman, H. van Rensburg, J. Visagie, D. Lamprecht	
11:50	OP 34 Catalytic combustion assisted ammonia reforming in a microchannel reactor for hydrogen production N. Engelbrecht, D. Bessarabov	
12:10	KL 06 Fischer-Tropsch technology: Today's status, challenges and future W. Ma, and B. Davis	Keynote
12:40 - 12:50	Deliberation oral prize	
12:50	Closing remarks	
13:15	Lunch Venue: Monomotapa	

14:30	OP 10 Surface modification of cobalt catalysts with silanes: tuning CO adsorption properties for mutable selectivity in Fischer-Tropsch synthesis <u>L. Macheli</u> and E. van Steen	
14:50	OP 11 Investigating reactive sputtered Ir_xNi_yO_z electrocatalysts for the oxygen evolution reaction in alkaline media <u>D. Coertzen</u> , R.J. Kriek, P.B.J. Levecque and A. Falch	
15:10	OP 12 The photocatalytic conversion of glycerol to hydrogen on silver-titania-graphene nanocomposite systems S. Gullapelli and <u>M.S. Scurrall</u>	
15:30	Tea	
Chair: Prof. L. Jewell		
16:00	OP 13 Morphology-specific synthesis of oxidic iron nanostructures R.L. <u>Thubakgale</u> , M.P. Mokhonoana and M.S. Scurrall	
16:20	OP 14 Dehydrogenation of liquid organic hydrogen carrier on Pt-transition metal subsurface alloys: A DFT study of perhydro-dibenzyltoluene <u>C.N.M Ouma</u> , P. Modisha and D. Bessarabov	
16:40	OP 15 Dendritic complexes of methyltrioxorhenium(VII): Evaluation as catalysts in the epoxidation of selected alkenes <u>A.V. Busa</u> , S.F. Mapolie, E. Nordlander and M.O. Onania	
17:00 - 17:30	KL 03 Recent Advances in the Characterisation of Porous Materials and Catalysts Using Adsorption <u>J. Kevin</u>	Keynote
19:00 - 23:30	Poretech Challenge & Dinner <i>Venue: Shebeen</i>	

14:00	Poster Session & Tea	
Chair: Dr. S.P. du Preez		
16:00	OP 22 Understanding the role of promoters on benzyl alcohol oxidation over platinum (Pt) based catalysts <u>A. Kunene</u> , G. Leteba and E. van Steen	
16:20	OP 23 The use of functionalized polymers to make hollow carbon spheres to be used as supports in catalysis <u>P. Mente</u> and N.J. Coville	
16:40	OP 24 Synthesis, structure elucidation of Fe chiral Fe(II)/Ni(II) – imino-pyridyl complexes and their application as catalysts in asymmetric transfer hydrogenation of ketones <u>R.T. Kumah</u> , S. Ojwach	
17:00 - 17:20	OP 25 Well-Dispersed Metal Oxide Supported Electrocatalysts for the Oxygen Evolution Reaction <u>Z. Rajan</u> , T. Binninger and R. Mohamed	
19:00 - 23:30	Conference Banquet <i>Venue: Starlight Boma</i>	