

# SCIENTIFIC PROGRAMME

TUESDAY 6 DECEMBER - MORNING

7.30-8.00	REGISTRATION Oppenheimer Entrance Foyer
8.10-8.30	<div style="display: flex; justify-content: space-between; align-items: center;"><div style="text-align: center;"><p>UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG</p></div><div style="text-align: center;"><p><b>WELCOME AND OPENING</b></p><p>Venue: Plenary/MS Hall (Oppenheimer Conference Room 2)</p><p><b>Prof Lesley Cornish</b></p><p><i>Chair: Dr Jaco Olivier / Prof Rodney Genga</i></p></div><div style="text-align: center;"><p>UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG</p></div></div>
8.30-8.50	<p style="text-align: center;"><b>Conference Announcements and Address</b></p> <p style="text-align: center;">Venue: Plenary/MS Hall (Oppenheimer Conference Room 2)</p> <p style="text-align: center;">Dr Jaco Olivier, MSSA President</p>
8.50-9.50	<p style="text-align: center;"><b>41<sup>st</sup> JOHN MATTHEWS MEMORIAL LECTURE</b></p> <p style="text-align: center;">Venue: Plenary/MS Hall (Oppenheimer Conference Room 2)</p> <p style="text-align: center;"><u><a href="#">LOW-VOLTAGE SCANNING ELECTRON MICROSCOPY: THE SECRETS OF ION-IRRADIATION INDUCED DAMAGE REVEALED</a></u></p> <p style="text-align: center;">Dr Iwona Jóźwik</p> <p style="text-align: center;"><i>Chair: Dr Jaco Olivier / Prof Rodney Genga</i></p> <p><i>Plenary Speaker sponsored by:</i></p> <div style="text-align: right;"><p><b>ThermoFisher</b> SCIENTIFIC</p></div>
09.50-10.20	<p style="text-align: center;"><b>COFFEE BREAK</b></p>

SESSION 1	Venue: Plenary/MS Hall (Oppenheimer Conference Room 2) Chair: Dr Johan Westraadt	Venue: LS Lecture Hall (Oppenheimer Conference Room 3) Chair: Prof Chant�lle Baker
10.20-10.50	<p style="text-align: center;"><b>KEYNOTE</b></p> <p style="text-align: center;"><a href="#"><u>SHI INDUCED BULK ROTATION IN NON-AMORPHIZABLE TARGETS: A NiO CASE STUDY</u></a></p> <p style="text-align: center;">J.H. O'Connell, D.A. Douglas-Henry</p>	<p style="text-align: center;"><b>KEYNOTE</b></p> <p style="text-align: center;">C.H. Pohl</p>
10.50-11.10	<p style="text-align: center;"><a href="#"><u>MOLECULAR DYNAMICS AND TEM INVESTIGATION OF SWIFT HEAVY ION TRACKS IN INSULATORS</u></a></p> <p>R.A. Rymzhanov, J.H. O'Connell, N. Medvedev, A. Janse van Vuuren, V.A. Skuratov, A.E. Volkov</p>	<p style="text-align: center;"><a href="#"><u>NOVEL INSIGHTS INTO THE GENUS LEIOTROCHA (MOBILIDA: URCEOLARIIDAE)</u></a></p> <p>G.P. de Jager, L. Basson, S. Colin and C. Feldhaus</p>
11.10-11.30	<p style="text-align: center;"><a href="#"><u>THERMODYNAMIC PARAMETERS FOR THE STABILIZATION AND TRANSFORMATION OF TETRAGONAL SHI TRACKS IN MONOCLINIC ZIRCONIA</u></a></p> <p>M.E. Lee, J.H. O'Connell, V.A. Skuratov</p>	<p style="text-align: center;"><a href="#"><u>CHARACTERISTIC CAVITIES NO LONGER VALID</u></a></p> <p>J. Hastings, L. Basson and G.P. de Jager</p>
11.30-11.50	<p style="text-align: center;"><a href="#"><u>ANNEALING - INDUCED MICROSTRUCTURAL CHANGES FOR SHI TRACKS IN POLYCRYSTALLINE SILICON NITRIDE</u></a></p> <p>A. Ibrayeva, J.H. O'Connell, A. Janse van Vuuren, V.A. Skuratov</p>	<p style="text-align: center;"><a href="#"><u>MICROSTRUCTURE OF TOOTH ENAMELOID IN TWO SHARK SPECIES</u></a></p> <p>M.E. Waldron, J. Wilmers and S. Bargmann</p>
11.50-12.10	<p style="text-align: center;"><a href="#"><u>A HIGH-RESOLUTION TEM STUDY OF THE INTERACTION OF SWIFT HEAVY IONS WITH INSULATORS</u></a></p> <p>A. Janse van Vuuren, A. Ibrayeva, J.H. O'Connell, R. Rymzhanov, V.A. Skuratov, M. Zdrovets</p>	<p style="text-align: center;"><a href="#"><u>PARASITIC FISH PROTISTS - FROM BAD TO GLAM TO DOWNRIGHT PECULIAR</u></a></p> <p style="text-align: center;">L. Basson</p>
12.10-12.30	<p style="text-align: center;"><a href="#"><u>THE INFLUENCE OF ZrB<sub>2</sub> ADDITIVES ON THE THERMAL STABILITY OF POLYCRYSTALLINE DIAMOND</u></a></p> <p>M. Jivanji, D. Aldmington, J.E. Westraadt</p>	
12.30-14.00	<p><b>LUNCH</b></p> <p>Venue: Barney's Restaurant</p>	

**TUESDAY 6 DECEMBER - AFTERNOON**

<b>SESSION 2</b>	<b>Venue:</b> Plenary/MS Hall (Oppenheimer Conference Room 2) <i>Chair: Prof Mike Lee</i>	<b>Venue:</b> LS Lecture Hall (Oppenheimer Conference Room 3) <i>Chair: Dr Albe Swanepoel</i>
14.00-14.20	<a href="#"><u>DYNAMIC RESTORATION MECHANISM OF Ti-0.162, Nb-0.394, Al-0.068, Fe 441 FERRITIC STAINLESS STEEL DURING HOT ROLLING</u></a>  <u>J.T Asante</u> , C.W Siyasiya	<a href="#"><u>ANTISECRETORY FACTOR (AF16) AS A POTENTIAL THERAPEUTIC AGENT IN A MODEL OF TRAUMATIC BRAIN INJURY</u></a>  <u>N. Heathcote</u> , J. Kriel and B. Loos
14.20-14.40	<a href="#"><u>PRECIPITATE EVOLUTION DURING HOT ROLLING &amp; IT'S IMPLICATION ON RECRYSTALLISATION IN 436 STAINLESS STEELS</u></a>  <u>M.Y. Salojee</u> , C.W. Siyasiya, K.A. Annan, J.S. Moema	<a href="#"><u>IN VITRO EFFECTS OF MAZ-51 IN COMBINATION WITH EGCG IN MELANOMA CELLS</u></a>  <u>C.C. Nadasen</u> , J.C. Serem, Y.N. Hlophe and K. Ncube
14.40-15.00	<a href="#"><u>MICROSTRUCTURAL BASED LIFE ASSESSMENT OF 1CrMoV TURBINE ROTOR STEELS AFTER LONG-TERM SERVICE</u></a>  <u>H.S. Nyembe</u> , J.H. Neethling, J.E. Westraadt	<a href="#"><u>MICROSTRUCTURE OF COMMONLY USED AUTOGRAFTS FOR ACL RECONSTRUCTION: QUADRICEPS, PATELLAR AND SEMITENDINOSUS TENDONS</u></a>  <u>S. Latiff</u> and O. I. Olateju
15.00-15.20	<a href="#"><u>SIMULATION OF LONG-TERM HIGH TEMPERATURE EXPOSURE OF X20 STEEL THROUGH LABORATORY ACCELERATED AGEING</u></a>  <u>S. Allies</u> , R.D. Knutsen, J.E. Westraadt	<a href="#"><u>AN IN VITRO INVESTIGATION OF KYNURENINE COMPOUNDS ON MELANOMA GROWTH AND INTRACELLULAR MORPHOLOGY</u></a>  <u>C. Basson</u> , J. Serem, P. Bipath and Y. Hlophe
15.20-15.40	<a href="#"><u>MULTISCALE FEATURE ENGINEERING FOR MACHINE LEARNING STRUCTURE-PROPERTY MODELS FOR CARBON STEELS</u></a>  <u>L. Westraadt</u> , J.E. Westraadt	
15.40-16.00	<b>COFFEE BREAK</b>	

<b>16.00-17.00</b>	<b>Life Sciences Workshop</b> Around the Light Microscope in 60 min: A Learning Zone Chalk and Talk - Dr James Wesley-Smith <b>Venue:</b> LS Lecture Hall (Oppenheimer Conference Room 3)
--------------------	---

SESSION 3	<b>Venue:</b> Exhibition Hall (Oppenheimer Conference Room 1) <b>MS - POSTER SESSION 1</b> <i>Chair: Dr Jacques O'Connell</i>	<b>Venue:</b> Oppenheimer Lobby 2 (Entry from Exhibition Hall) <b>MS - POSTER SESSION 2</b> <i>Chair: Prof Rodney Genga</i>
16.00-16.05	<u><a href="#">DISLOCATION DENSITY MEASUREMENT IN AISI316L STAINLESS STEEL USING ELECTRON CHANNELING CONTRAST IMAGING (ECCI)</a></u>  <u>L.C. Pullen</u> , J.E. Westraadt, D. Ramasimong, R.D. Knutsen	<u><a href="#">STUDY OF THE IMMOBILISATION OF PALLADIUM BY SILICON AND ZIRCONIUM IN GRAPHITE</a></u>  <u>G. Mtwazana</u> , A. Janse Van Vuuren, J.H. Neethling
16.05-16.10	<u><a href="#">STRUCTURAL CHARACTERIZATION OF AMORPHOUS AND CRYSTALLINE MOLYBDENUM PHOSPHIDE CATALYSTS FOR HYDROGEN EVOLUTION REACTION</a></u>  <u>S.S. Nkabinde</u> , N. Moloto	<u><a href="#">CHEMICAL ANALYSIS OF NANO-SIZED STEEL PRECIPITATES USING SCANNING ELECTRON MICROSCOPY</a></u>  <u>N.W. Mfuma</u> , W.E. Goosen, J.E. Westraadt
16.10-16.15	<u><a href="#">STRUCTURAL MODIFICATION OF ZSM-5 NANOSHEETS BY PHOSPHORUS-TREATMENT FOR C16 HYDROCRACKING REACTIONS</a></u>  <u>T. Tahier</u> , P.J. Kooyman	<u><a href="#">SCANNING TUNNELING MICROSCOPY: INSIGHTS FROM FIRST PRINCIPLES CALCULATIONS</a></u>  <u>A.M. Ukpong</u>
16.15-16.20	<u><a href="#">SYNTHESIS OF NOVEL MICRO AND NANOSTRUCTURED MIXED-METALS OF WO<sub>3</sub> PHOTOCATALYSTS FOR THE REDUCTION OF CO<sub>2</sub></a></u>  <u>M. Mgolombane</u> , E.J. Olivier, A.S. Ogunlaja	<u><a href="#">DEVELOPMENT AND CHARACTERISATION OF ANTIBACTERIAL TITANIUM-BASED ALLOYS WITH COPPER FOR BIOMEDICAL APPLICATIONS</a></u>  L. Spotose, <u>N.S. Phala</u> , C. Polese, L.A. Cornish
16.20-16.25	<u><a href="#">DEVELOPMENT OF HYDRODESULFURIZATION CATALYSTS FOR THE REFRACTORY SULFUR COMPOUNDS: EFFECT OF CHELATING LIGANDS AND SUPPORT</a></u>  <u>S. Majodina</u> , Z.R. Tshentu, E.J. Olivier, A.S. Ogunlaja	<u><a href="#">ANALYSIS OF In<sub>x</sub>Ga<sub>1-x</sub>As EPILAYERS BY INFRARED SPECTROSCOPY AND ELECTRON MICROSCOPY</a></u>  <u>J.A.A. Engelbrecht</u> , S. McKee, W.E. Goosen, E.G. Minnaar, A. Janse van Vuuren
16.25-16.30	<u><a href="#">STRUCTURAL EFFECTS OF HIGH-ENERGY HEAVY ION IMPACT IN NANOCRYSTALLINE Y-Ti-O AND Y-Al-O</a></u>  <u>A. Ibrayeva</u> , A. Mutali, J.H. O'Connell, A.S. Sohatsky, V.A. Skuratov, I. Ivanov	<u><a href="#">MICROSTRUCTURE AND MECHANICAL PROPERTIES OF CREEP-EXHAUSTED 14MoV6-3 STEEL AFTER REGENERATIVE HEAT TREATMENT</a></u>  <u>T. Masole</u> , L.A. Cornish, M.O. Bodunrin

16.30-16.35	<p><a href="#">EFFECT OF SHI IRRADIATION ON MICROSTRUCTURAL CHANGES OF SELENIUM IMPLANTED POLYCRYSTALLINE SILICON CARBIDE</a></p> <p><u>T.S. Mabelane</u>, Z.A.Y. Abdalla, T.T. Hlatshwayo</p>	<p><a href="#">THE SYNTHESIS AND CHARACTERIZATION OF GOLD@TIN(IV) OXIDE NANOCOMPOSITE MATERIALS</a></p> <p><u>T. Makgale</u></p>
16.35-16.40	<p><a href="#">MICROSTRUCTURAL EVOLUTION OF POLYCRYSTALLINE SILICON CARBIDE CO-IMPLANTED WITH SILVER AND HELIUM AT 350 °C</a></p> <p><u>S.Z. Mtsi</u>, Z.A.Y. Abdalla, T.T. Hlatshwayo</p>	<p><a href="#">INFLUENCE OF COATING TECHNIQUES ON THE STRUCTURAL AND OPTICAL PROPERTIES OF Fe<sub>2</sub>O<sub>3</sub> NANOSTRUCTURES</a></p> <p><u>A. Holtzhausen</u>, M.M. Diale</p>
16.40-16.45	<p><a href="#">INFLUENCE OF Ag<sup>+</sup> ION IMPLANTATION ON THE MORPHOLOGY OF ZnO NANORODS</a></p> <p><u>K. Lefatshe</u>, D. Sebuso, M. Madhuku, C. Muiva</p>	<p><a href="#">EFFECTS OF MECHANICAL ALLOYING ON SPARK PLASMA SINTERING OF Fe-Ni-Si POWDERS</a></p> <p><u>B.L. Bayode</u>, A.O. Ogunmefun, T.S. Tshephe, M.M. Ramakokovhu and Peter Olubambi</p>
16.45-16.50	<p><a href="#">EFFECT OF MICROSTRUCTURE ON CORROSION BEHAVIOR OF AISI 316 L STAINLESS STEEL IN SIMULATED BODY FLUID.</a></p> <p><u>N.K. Ngeleshi</u>, B.A. Obadele , B.C. Mashabela, X.F. Nukeri, P.A Olubambi</p>	<p><a href="#">IMMERSION STUDIES OF PLASMA SPRAYED HYDROXYAPATITE COATINGS DEPOSITED ON GEOMETRICALLY DIFFERENT Ti-6Al-4V ALLOY SUBSTRATES</a></p> <p><u>U. Dockrat</u>, T.T. Thabethe, J.B. Malherbe, T. Nstoane</p>
16.50-16.55	<p><a href="#">ASSESSMENT OF THE SIZE OF NANOPARTICLES BY USING X-RAY DIFFRACTION AND SCANNING ELECTRON MICROSCOPY</a></p> <p><u>T.M. Abdalkreem</u>, R.E. Kroon, H.C. Swart</p>	<p><a href="#">COROSION BEHAVIOUR OF AUSTENITIC LOW-DENSITY STAINLESS STEELS IN SIMULATED BODY FLUIDS</a></p> <p>M.O. Bodunrin, A. Dladla, <u>N. Rundora</u>, D.E.P Klenam</p>
16.55-17.00	<p><a href="#">BACK-ANNEALING OF HOT DIP GALVANISED STRIP STEEL MICROALLOYED WITH VANADIUM</a></p> <p><u>J.S. Steyn</u>, J.E. Westraadt, K.M. Banks, C.W. Siyasiya, R.J. Mostert</p>	<p><a href="#">TUNING PREPARATION - INDUCED RELAXATION DYNAMICS IN HETEROGENEOUS POLYMER FILMS</a></p> <p><u>A. A. Mulama</u>, A. O. Oduor, G. Reiter</p>

17.00-17.05	<p><a href="#"><u>ANALYSIS OF NANOCRYSTALLINE DIAMOND LAYERS DEPOSITED ON ZIRLO</u></a></p> <p>S. Ngongo, A. Janse van Vuuren, J. H. Neethling, I. Kratochva</p>	<p><a href="#"><u>MICROSTRUCTURE EVALUATION OF Ti-35Nb-10ZrO-5Ta-xCu PREPARED BY SPARK PLASM SINTERING FOR BOIMEDICAL APPLICATION</u></a></p> <p>R.A Busang, M.L. Teffo, B.L. Bayode, B.J. Babalola<sup>2</sup></p>
17.05-17:10	<p><a href="#"><u>SYNTHESIS AND CHARACTERIZATION OF TiO<sub>2</sub>@Co<sub>x</sub>O<sub>y</sub> CORE-SHELL NANOPARTICLES FOR USE IN FISCHER TROPSCH SYNTHESIS</u></a></p> <p>R. Rikhotso, E.J. Olivier, G. Mhlongo and A. Govender</p>	<p><a href="#"><u>CHARACTERISATION OF VO<sub>x</sub>/MgO CATALYSTS PRODUCED USING SOLUTION COMBUSTION SYNTHESIS: MIXED FUEL APPROACH</u></a></p> <p>S. Padayatchee, H.B. Friedrich, P.Ntola, E.J. Olivier and A. Govender</p>
17.10-17:15	<p><a href="#"><u>CARBON FIBERS GROWN FROM A COPPER NANOPARTICLE ENCAPSULATED WITHIN HOLLOW CARBON SPHERES</u></a></p> <p>M.S Maubane-Nkadimeng, P.M. Gangatharan and N.J Coville</p>	
17.15-18.15	<p><b>Poster Sessions Q &amp; A</b></p>	

<p><b>19.00</b></p>	<p><b>Braai Evening</b>  Venue: Gold Reef City Old Town Street  (next to Barney's Restaurant)</p> <p><b>Sponsored by</b>  Zeiss Microscop</p>	 <p><b>Seeing beyond</b></p>
---------------------	---	---

