Metals play a significant role in industrialisation and technological advancements. Do you ever wonder then what life would be like without metal resources?

The depletion of natural rich ore deposits coupled with a fall in grade, a decline in productivity, rising operational and energy costs, concerns on sustainability and environmental impact of mining and metal related activities have been affecting the mining and metals industry in the recent past. Unless innovative methods that look at the smart use and recovery of metals from metal resources are developed, the world will be faced by a metal supply risk that will impact on future economic growth and technological development.

The SAIMM Hydrometallurgy Conference, 2016, will bring together internationally and locally recognized experts, industries, R&D establishments, academia as well as students to explore how future metal demands can be met through modern hydrometallurgical technologies that can:

- Assist in sustainable metal extraction
- Lower energy costs
- Minimise the impact on the environment

WHO SHOULD ATTEND
The conference will be of value to:

- Hydrometallurgical plant managers and metallurgists
- Equipment and reagent suppliers to the hydrometallurgical industry
- Hydrometallurgical technology development companies
- Mining industry consultants
- Research and academic personnel

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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30–09:00</td>
<td>Welcome and Introduction</td>
<td>Steven Rymer</td>
</tr>
<tr>
<td>09:00–09:30</td>
<td>Review existing ‘models’ for process project developments</td>
<td>M. Dworzanski</td>
</tr>
<tr>
<td>09:30–11:00</td>
<td>Flowsheet selection</td>
<td>M. Nicol</td>
</tr>
<tr>
<td>11:00–11:20</td>
<td>Tea</td>
<td></td>
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<tr>
<td>11:20–13:00</td>
<td>Process Testwork</td>
<td>J. Neale</td>
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<tr>
<td>13:00–14:00</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>14:00–15:00</td>
<td>Simulation Models</td>
<td>F. Crundwell and N. du Preez</td>
</tr>
<tr>
<td>15:00–15:15</td>
<td>Tea</td>
<td></td>
</tr>
<tr>
<td>15:15–16:30</td>
<td>Project Issues / Case Study</td>
<td>L. Bryson</td>
</tr>
</tbody>
</table>
LEACHING PROCESSES
Pressure leaching behaviour of non-isothermal process of molybdenum and nickel sulfide from black shale
Z. Deng, C. Wei, X. Li, C. Li, M. Li and G. Fan, Kunming University of Science and Technology, China

Investigating the influence of microwave pre-treatment on zinc leaching from coarse cone and HPGR crushed sphalerite ore particles
E. Charkinya, and S.M. Bradshaw, Stellenbosch University, South Africa

Cr (VI) generation during dry and wet milling of chromite ore
N.R. Mabwe, C. Chitsora and D.J. Simbi, University of Zimbabwe, Zimbabwe

Investigation of leach phenomena in large particles during heap leaching using X-ray Computed Tomography
R. Ram, J. Petersen, M. Becker and D. Bradshaw, University of Cape Town, South Africa

A value based approach to leach optimization at Rössing Uranium Limited
N. Jansen van Rensburg and J. Petersen, University of Cape Town, South Africa

In situ XAS study of arsenic speciation during pressure oxidation
M. Chen, Y. Yang, W. Liu and S.K. Bhargava, CSIRO Mineral Resources, RMIT University, Australia

Kinetics of uranium extraction from coffinite—A comparison with other common uranium minerals
H.S. Reynolds, R. Rama, M.I. Pownceby, J. Tardioa, L. Jones and S.K. Bhargava, RMIT University, CSIRO Mineral Resources, Australia

Considerations and potential economic advantages for the in situ recovery of gold from deep, hard-rock deposits
D.J. Robinson, L.L. Kuhr, P. Breuer and N. Haque, CSIRO Mineral Resources, Australia

A Phreeqc model of heap leaching
P.J. van Staden and J. Petersen, Mintek, University of Cape Town, South Africa

The process chemistry and mineralogy of brannerite leaching
R. Gilligan and A.N. Nikoloski, Murdoch University, Australia

Use of the attainable region method to specify optimal conditions for a milling and leaching process
N. Hlabangana, G. Danha, D. Hildebrandt, D. Glasser and M. Bwalya, University of South Africa, University of Witwatersrand, South Africa

Conversion kinetics of cyanide to thiocyanate in the presence of sulphur, polysulphide, sulphite and thiosulphate
C. Burcher-Jones, S. Lodewyk, K. Shaik and J. Petersen, University of Cape Town, South Africa

The kinetics of zinc sulfide dissolution with ferric iron
F. Saloojee, F. Crundwell and N. du Preez, CM Solutions

COPPER LEACH PROCESSES
Value recovery from Mukondo mine (DRC) cobalt low grade ore by heap leaching and solvent extraction

Improving the efficiency of Vat Leaching of oxidized copper and cobalt flotation concentrates by pseudo fluidized bed technique
G.W.N. Nikulu, M.L. Zeka, S. Kapenda and K.P. Kongolo, University of Lubumbashi, Gécamines, Democratic Republic of the Congo

The use of organic reducing agents on the extraction of Cu from oxidized exotic-Cu minerals
R. Lasnibat, A. Menzies and L. Velásquez, Universidad Católica del Norte, Antofagasta, Universidad de Santiago, Portugal, Chile

Influence of sea water and discard brine on the dissolution of copper ore and concentrates
L. Velásquez and V. Quezada, Universidad Católica del Norte, Antofagasta, Universidad de Santiago, Portugal, Chile

Recovery of copper metal through reprocessing of residues from a hydrometallurgical plant
L.M. Shengo, K.B. Kitungwa and W.N.C. Mutiti, University of Lubumbashi, Shalina Group, Democratic Republic of the Congo

Physical and chemical transformations of gangue materials during leaching of copper ore particles and their influence on copper leaching kinetics
T. Vargas, F. Rojas, C. Bahamondez, R. Castro, C. Ihle and M. Caraballo, University of Chile, Advanced Mining Technology Center (AMTC), Chile

Defoaming and antifoaming chemistry for copper leaching circuit
N. Mautsa, M. Bower, D. Choia, B. Nel and J. Miller, Kemira South Africa

Mitigation of the process dysfunctions related to the talcaceous minerals presence in the feed of a copper hydrometallurgical plant operating in Katanga - DR Congo
L.M. Shengo, P. Kabwika, M.J. Matepa and J.L.M. Mulumba, University of Lubumbashi, Glencore International AG, Democratic Republic of the Congo

A kinetic study of the leaching of chalcopyrite in ammonia-ammonium sulphate solutions
T. Moyo and J. Petersen, University of Cape Town, South Africa

Progress in understanding the mechanism of dissolution of chalcopyrite
F. Crundwell and L. Bryson, CM Solutions (Pty) Ltd and Anglo American Technical Solutions

METALLURGICAL AND POST CONSUMER WASTE PROCESSING
Effects of mechanical activation on the washing behaviour of secondary zinc oxides for a better halogen removability
C. Benigni and J. Antrekowitsch, University of Leoben, Austria

Processing of waste lithium ion batteries to recover cobalt as a valuable product
M.K. Jhaa, S.K. Sahua and V.K. Jhab, CSIR-National Metallurgical Laboratory, ADV Metal Combine Pvt. Ltd, India

A kinetic investigation of iodine leaching of gold leaf from electronic circuit boards
Z. Sadan, Ve Nt ozakh, M. Amirudin, J. Petersen, D. Bradshaw and T. Moyo, University of Cape Town, South Africa

Recovery of rare earth oxide from phosphor powder of spent fluorescent lamps
Comparing nitric acid and sulphuric acid for leaching of metals from printed circuit board waste
W.A. Rossouw and C. Dorfling, University of Stellenbosch, South Africa

Scoping study on the upgrading of fluxed and fluxless titaniferous magnetite slags using the ‘upgraded slag’ process
X.C. Goso, J. Petersen, J. Nell and K. Bisaka, Mintek, South Africa

Indicative vanadium deportment in the processing of titaniferous magnetite by the alkali roast-leach and electric furnace smelting processes
X.C. Goso, H. Lagendijk, M. Erwee and G. Khosa, Mintek, South Africa

Recovery of rare earth elements from blast slag using organic acids
Abhilash, P. Meshram, B.D. Pandey, S. Sarkar and T. Venugopalan, CSIR-National Metallurgical Laboratory, RD&T, Tata Steel Limited, India

Lithium battery recycling – concept level study
B.D.H. Knights and F. Saloojee, CM Solutions (Pty) Ltd, South Africa

A hydrometallurgical recovery of rare metals from the engine-reverted turbine blade superalloys
R.R. Srivastava, M.S. Kim and J.C. Lee, Korea University of Science and Technology (UST), Korea Institute of Geoscience and Mineral Resources (KIGAM), Korea

Dissolution of uranium from nuclear conversion plant waste
M. Potgieter, NECSA, South Africa

Waste printed circuit boards treatment by integrated hydrometallurgical processes
I. Birióaga, I. De Michelis and F. Vegliò, University of L’Aquilia, Italy

Extraction of silica from calcined fly ash: Process optimisation, kinetics and thermodynamics
T. Falayi, F. Ntuli and F.N. Okonta, University of Johannesburg, South Africa

BIOPROCESSING

Extraction of copper and cobalt from oxidized ore using fungal metabolic acids
S. Biswas and A.F. Mulaba-Bafubiandi, University of Johannesburg, South Africa

A comparison of chemical and bioleaching studies using synthetic uranium minerals
Y. Yang, R. Rama, M. Chena, S. McMaster, M.I. Pownceby, J. Tardioa, L. Jones and S. Bhargavaa, RMIT University, CSIRO Mineral Resources, Australia

Application of a biological fuel cell concept for the bacterial oxidation of ferrous ion in leaching solutions containing high concentrations of chloride ions
T. Vargas and G. Meruane, University of Chile, Advanced Mining Technology Center (AMTC), Chile

Microbial ferrous iron oxidation at low temperature conditions in a packed column bioreactors
E. Chukwuchendo and T. V. Ojumu, Cape Peninsula University of Technology, South Africa

Bioleaching of a polymetallic sulfide ore from Capillitas (Argentina)
P.A. Chiacchiarinib, L. Surina, A.G. Ferrandoa, C. Corderoa and A. Giavenoa, Universidad Nacional del Comahue, PROBIEN (CONICET-UNCo), Argentina

SOlVENT EXTRaCTION AND ION EXCHaNGE

Biodydrometallurgical options for the extraction of rare earth elements from ion adsorption clays

Cyanide biodegradation system to treat gold mining effluent and its microbial community dynamics with various inocula

A comparison between mesophilic and moderate thermophilic bioleaching of printed circuit board (PCB) for copper recovering
M.L.M. Rodrigues, S. Gaydardzhiev, K.C.S Lopes and V.A. Leão, Universidade Federal do Ouro Preto, Universidade Liège, Brazil

Purification of an industrial platinum group metals dilute process stream using waste yeast biomass immobilized on plaster of Paris
D. Oke, S. Ndlovu and V. Sibanda, University of the Witwatersrand, South Africa

PRECIPITATION AND CRYSTALLIZATION

Purification of coal fly ash leach liquor for alumina recovery
M. Rampou and S. Ndlovu, University of the Witwatersrand, South Africa

Characterisation of precipitate formed during iron and precious metal removal from sulphate leach solutions
R. Coetzee, C. Dorfling and S.M. Bradshaw, University of Stellenbosch, South Africa

Ice scaling as an operational limitation in continuous Eutectic Freeze Crystallization
D. Jooste, J. Chivavava and A. Lewis, University of Cape Town, South Africa

Effect of ethylene maleic anhydride on the particulate processes during hydrogen reduction of nickel ammine sulphate solutions
R.A. Iloya and F. Ntuli, University of Johannesburg, South Africa

Recovery and recycle of magnesium hydroxide in base metals precipitation circuits
S. Mokoena and N. Mulaudzi, Mintek, South Africa

Copper sulphate crystallisation plants at remote ore locations as an alternative to DMS plants for the African Copper Belt
P. Muzadi, ProProcess, South Africa

SOLVENT EXTRACTION AND ION EXCHANGE

A techno-economic evaluation of copper recovery from mine water using a novel continuous ion exchange process
J. Carr and C. van der Walt, CleanTeQ and Multotec Process Equipment, Australia and South Africa

Solvent extraction of zirconium and hafnium from (NH4)3Zr(Hf)F7 using amine based extractants
E.W. Conradie, D.J. van der Westhuizen, J.T. Nel and H.M. Krieg, North-West University and The South African Nuclear Energy Corporation (SOC) Ltd. (Necsa), South Africa

Meeting the hydrometallurgical industries needs in future applications with tailored/innovative developments in ion exchange resins technology - industrial examples in Cu/Co/Ni separation, extraction of Au and extraction of uranium
J. Bester, DowWater and Process Solutions, The Netherlands
Analysis of equilibrium isotherms of ion exchange resin in cyclic duty
M. Maloka, South Africa

Counter current simulated moving bed type ion exchange process for purification of silver chloride
T. Sainio and S. Virolainen, Lappeenranta University of Technology, Finland

Clay treatment in African copper solvent extraction operations
P. Cole, Cytec Solvay Group, South Africa

Automation of a membrane based solvent extraction of Zr and Hf
K. Meirholz, D.J. Van der Westhuizen and H.M. Krieg, North-West University, South Africa

A novel flowsheet for solvent extraction fractionation of lithium, cobalt and nickel
S. Virolainen, M.F. Fini, A. Laitinen and T. Sainio, Lappeenranta University of Technology, Finland

Recovery of platinum group metals from dilute solutions: A review
M. M. Mmonatau, University of the Witwatersrand, South Africa

WATER TREATMENT AND UTILISATION

Acid mine drainage water treatment using the Savmin™ process
T. Netshikhudini and M. van Rooyen, Mintek, South Africa

Removal of toxic heavy metals from a real acid mine drainage solution using zeolite, bentonite and cassava peel waste biomass: A comparative study
Y. Nleya, S. Ndlovu, G.S. Simate, University of the Witwatersrand, South Africa

Adsorption of fluorides in contaminated water by bone chair: performance in batch systems and continuous
M. Nigri and S.D.A. Rocha, Universidade Federal de Minas Gerais, Brazil

Quantification of water use in South African platinum mines
D. Dheda, C.M. Sheridan and K.G. Harding, University of the Witwatersrand, South Africa

An investigation into the effect of Fe (III) concentration on the product characteristics of Fe (III) oxyhydroxide precipitates from acid mine drainage and bio-hydrometallurgical wastewater
C. Mangunda, J. Petersen, A. Lewis, University of Cape Town, South Africa

Removal of fluoride from industrial waste waters with industrial minerals
J.H. Potgieter, Manchester Metropolitan University, University of the Witwatersrand, South Africa

ELECTROCHEMICAL PROCESSES

Electrochemical study of copper sulfide minerals
L.B. Lazcano, M. Nicol and L. Velásquez, Universidad Católica del Norte, Antofagasta, Murdoch University, Universidad de Santiago, Portugal, Australia and Chile

Probing surface electrochemical activity of complex natural mineral samples with a microelectrode
L.A. Jones, R. Ram, M. Chen, A. Basile, M. Pownceby and S. Bhargava, RMIT University, Australia

Chalcopyrite dissolution using electrochemical tests
E. Cruces, G. Frisch and L. Velásquez, Institut für Anorganische Chemie, Universidad Católica del Norte, Antofagasta, Universidad de Santiago, Portugal, Germany and Chile
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<th></th>
<th>Early registration fees</th>
<th>After 15 June 2016</th>
</tr>
</thead>
<tbody>
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<td>Author</td>
<td>R7 999</td>
<td>R7 999</td>
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<td>R7 999</td>
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<td>R8 999</td>
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<td>Students/Retired Members</td>
<td>R4 500</td>
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</tbody>
</table>

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Registration One Day: R5 400.00 OR Registration Two days: R6 999

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Please indicate (✓ tick) which day/s you will be attending.
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