

IMPC 2026

XXXII INTERNATIONAL MINERAL PROCESSING CONGRESS
18 - 22 OCTOBER 2026 CAPE TOWN SOUTH AFRICA

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Empowering a future-fit mineral processing industry

We would like to invite you to attend the
XXXII International Mineral Processing Congress
in Cape Town, South Africa from **18 - 22 October 2026**.

IMPC 2026 will be hosted by the Southern African Institute of Mining and Metallurgy (SAIMM).

PROGRAMME

WEDNESDAY
21 OCTOBER 2026

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Venue:	Auditorium 1	Plenary
Session Chair: M Tavares		
08:00-08:05 Safety Briefing		
08:05-08:10 Welcome		
08:10-08:40 Reimagining Mineral Processing: From Recovery to Value Creation, P. Porto, Vale S.A., Brazil		

Parallel Session 1:
Comminution
Venue: 2.61-2.63

Time	Theme / Session	Presentation
		Session Chair: *M. Powell, University of Queensland, SMI, JKMRC*
08:45-09:05	Keynote Address	**Knowledge based design of stirred media milling process from lab to production** A. Kwade, *Institute for Particle Technology, Braunschweig University of Technology, Germany*
09:10-09:30	Comminution | HPGRs	**Developments in roller press technology: HPGR and ARGO** M. Daniel[1], K. Daniel[1], R. Dunne[2], C. Macmillan[3], P. Drüphake[4] *[1]CMD Consulting Pty Ltd, [2]Robert Dunne Consulting, [3]Savis Minerals,* *[4]Argo IPS GmbH, [1,2]Australia, [3]Namibia [4]Germany*
09:35-09:55	Comminution | HPGRs	**Risk analysis of HPGR edge design and its effect to production** Heinicke, F. Krajewski
09:55-10:15	Break	Mid-Morning Refreshments
10:15-12:30	GCC Workshop in Roof Terrace	
12:30-13:30	Break	Lunch
		Session Chair: S.H. Nyakunwa
13:30-13:50	Comminution | Stirred Mills	**Stirring the Pot, 30 Years of Innovation and Beyond** I. Gurnett, P. Bullock *Glencore Technology, Australia*

13:55-14:15	Comminution | Stirred Mills	**Mutual interactions in multi-component comminution with stirred media mills: Effects on breakage rate and residence time distribution** M. Tobaben, A. Kwade
14:20-14:40	Comminution | Stirred Mills	**Comparison of particle tracking techniques for investigating media dynamics in opaque mineral processing systems** S. Bremner[1], A.C. Brandt[2,3], A. Kwade[2] A.N. Mainza[1] *[1]University of Cape Town, South Africa* *[2]Institut Für Partikeltechnik, Technische Universität Braunschweig, Germany* *[3]Netzsch Trockenmahltechnik GmbH, Grinding & Dispersing, Germany*
14:40-15:00	Break	Afternoon Refreshments
		Session Chair: B. Cleremont
15:05- 15:25	Comminution | AG/SAG/ Ball Mills	**A mechanistic approach to simulating the grind-out process in semi-autogenous milling** T.S.M. Gamaa, R.M. Carvalho, L.M. Tavares
15:30-15:50	Comminution | AG/SAG/ Ball Mills	**Evaluating liner wear in tumbling mills through insights into media dynamics** *T.L. Moodley, S.N. S, I. Govender*
15:55-16:15	Comminution | AG/SAG/ Ball Mills	**Enhancing sag mill start-up and performance with hybrid liners: a versatile solution for modern operations** J. Girón1, V. Grover[2], M. Sherman1 [1]Tega Industries, [2]Fluor, Canada
16:20-16:40	Comminution | AG/SAG/ Ball Mills	**Processing low competence ores in autogenous mills: key testwork to consider** S. Nkwanyana, A.N. Mainza, M.S. Powell
16:40	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 2:
Flotation 1
Venue: Auditorium 1

Time	Theme / Session	Presentation
		Session Chair: Z, Yangge
08:45-09:05	Keynote Address	**Reimagining flotation: innovation pathways for a future-fit mineral processing industry** Y. Peng *The University of Queensland, Australia*

09:10-09:30	Flotation | Chemistry	**Sulfidisation-based activation of oxidised platinum group minerals for enhanced flotation recovery** A. Wali, B. McFadzean *University of Cape Town, South Africa*
09:35-09:55	Flotation | Chemistry	**A surface oxygen ligand–dominated mechanism in oxide mineral flotation: A new criterion for reagent design** *M. Yuqi*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: P. Brito Parada, Imperial College London, United Kingdom
10:15-10:35	Flotation | Chemistry	**Thermal pretreatment-enhanced flotation of electrode materials recovered from spent lithium-ion batteries** Y. Yang, S. Nazari, J. Qiao, A. Hassanzadeh, Y. He, C. Duan *China University of Mining and Technology, China*
10:40-11:00	Flotation | Chemistry	**The influence of coagulants on direct floc-flotation of iron ore tailings"** I. Reis, G. Correa, Y. Foucaud, J. Laine, M. Badawi, N. Kanari
11:05-11:25	Flotation | Chemistry	**Xanthate and thionocarbamate collector adsorption on Pd-doped pentlandite (Fe3Pd2Ni4S8) (311) surface: An ab-initio study** K.B. Molala, P.P. Mkhonto, M.A. Mehlape, P.E. Ngoepe *University of Limpopo, South Africa*
11:30-11:50	Flotation | Chemistry	**Evaluation of carbon-based adsorbents for the reduction of ion build up in flotation recycled water** L.V. Mokoena, T. Mogashane, M. Motlatle, J. Tshilongo, M. Moya, H. Richards *Mintek / University of the Witwatersrand*
11:55-12:15	Flotation | Chemistry	**Adsorption behaviour of xanthate, dithiocarbamate and trithiocarbonate collectors for recovery of hollingworthite and irarsite minerals: A DFT-D3 study** S.T. Ntobeng, P.P. Mkhonto, P.E. Ngoepe, M.A. Mehlape *University of Limpopo, South Africa*
12:15:13:15	Break	Lunch
		Session Chairs: W. Sun, Central South University, China
13:30-13:50	Flotation | Chemistry	**Mitigation of cations presence in apatite flotation** G. Budemberg[1], P. Rabelo[1], R. Jolsterå[2], S. Chehreh Chelgani[1] *[1]University of Technology, [2]Luossavaara-Kiirunavaara AB – LKAB, Sweden*
13:55-14:15	Flotation | Chemistry	**Mechanism and application of nano-microemulsion collector for enhanced flotation of fine-grained molybdenite** H. Liu, G. Wu, Y. Zhu, L. Wang, T. Lu, C. Liu, Y. Ma *BGRIMM Technology Group, China*

14:20-14:40	Flotation | Chemistry	**Roles of self-released and added CO2 micro-nanobubbles in dolomite flotation** Y. Zhang[1], Z. Wei[1], W. Xu[2], J. He[1,2,3], G. Li[1,3,4] *[1]Zhengzhou University,China,* *[2]State Key Laboratory of Green and Efficient Development of Phosphorus Resources,* *[3]State Key Laboratory of Critical Metals Beneficiation, Metallurgy and Purification,* *[4]Zhongyuan Purification Manufacturing Process Laboratory, China*
14:40-15:00	Break	Afternoon Refreshments
		Session Chairs: C. Liu
15:00- 15:20	Flotation | Chemistry	**Sustainable and selective separation of malachite from calcite in tailings recycled water by a novel dithiocarbamate depressant** X. Fu
15:25-15:45	Flotation | Chemistry	**Synergistic effect of anionic–nonionic collector mixtures on the flotation separation of magnesite from dolomite** I.V. Filippova, L.O. Filippov Université de Lorraine, CNRS, France
15:50-16:10	Flotation | Chemistry	**Confronting and incorporating ore system complexity: New opportunities for bridging fundamental and applied studies in flotation chemistry** D.R. Nagaraj, R. Farinato *Columbia University in the City of New York, United States*
16:15-16:35	Flotation | Chemistry	**Enhancing the collecting ability of hydroxamic acids through molecular design: Insights from methyl-substituted benzohydroxamic acids in scheelite flotation** C. Deng, Y. Zhang, Y. Ni, Z. Wang, D. Li, C. Wang, W. Sun, H. Han *Central South University, China*
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 3:
Flotation 2
Venue: 1.61-1.62

Time	Theme / Session	Presentation
		Session Chair: J. Yianatos, Universidad Técnica Federico Santa María, Chile
08:45-09:05	Keynote Address	**What about the gangue? Influence of flotation kinetics on separation efficiency** J. Sweet *Mining3, South Africa*

09:10-09:30	Flotation | Kinetics	**Drainage dynamics of flotation gas–solid interfacial liquid films under the action of a typical frother (No. 2 oil)** B. Zhang[1,2,3], B. Lin[1], X. Yan[1,2,3], J. Ran[4,1], H. Zhang[1,2,3], H. Wang[1,2,3] *[1,2,3]China University of Mining and Technology, dSchool of Mining Engineering and Geology, Xinjiang Institute of Engineering, China*
09:35-09:55	Flotation | Kinetics	**Roles of self-released and added CO^2 micro-nanobubbles in dolomite flotation** Y. Zhang[1], Z. Wei[1], W. Xu[2], J. He[1,2,3], G. Li[3,1,4] *[1]Zhengzhou University, [2]State Key Laboratory of Green and Efficient Development of Phosphorus Resources, [3]State Key Laboratory of Critical Metals Beneficiation, Metallurgy and Purification. [4]Zhongyuan Purification Manufacturing Process Laboratory, China*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: R. Kappes, Newmont, USA
10:15-10:35	Flotation | Kinetics	**Development of a bubble-aggregate attachment force model for simulating mineral flotation recovery** T. Al-Shami, G. Franks, E. Goudeli *The University of Melbourne, Australia*
10:40-11:00	Flotation | Kinetics	**Fine particle–bubble detachment and enhanced flotation selectivity in turbulent flow fields** H. He, Z. Sun, X. Li, X. Yan, L. Wang, H. Zhang, J. Ran *China University of Mining and Technology, China*
11:05-11:25	Flotation | Kinetics	**A study on the impact of laboratory-to-plant flotation scale-up using modelling or interpolation in kinetic characterisation** F. Flores, Á. Esteban, G. Molina-Meneses, M. Silva-Marfán, L. Vinnett *[1]Universidad Técnica Federico Santa María, Chile*
11:30-11:50	Flotation | Kinetics	**Improving flotation recovery of ultrafine chalcocite particles through high intensity conditioning** A.A.S. He, W. Wang, G. Shungu *Kamoa Copper S.A, Congo (DRC)*
11:55-12:15	Flotation | Kinetics	**Linking mineral liberation and flotation kinetics in industrial copper flotation banks** P. Vallejos, J. Yianatos *Universidad Técnica Federico Santa María, Chile*
12:15:13:15	Break	Lunch
		Session Chair: N. Shackleton, AECI Mining Chemicals, South Africa
13:30-13:50	Flotation | Chemistry	**Influence of dispersant type on the flotation of a South African PGE ore with high alteration mineral content** J. Fraser, B. McFadzean, M. Becker, S. Geldenhuys
13:55-14:15	Flotation | Chemistry	**Investigating the effect of high voltage pulses on mineral surface chemistry: A comparative study with conventional comminution and its implications for flotation** J.M. Maniaul[1,2], C. Antonio[1,2], S. Brito e Abreu[1,2] *[1]Julius Kruttschnitt Mineral Research Centre, Sustainable Minerals Institute, The University of Queensland, [2]ARC Centre of Excellence for Enabling Eco-Efficient Beneficiation of Minerals, Australia*

14:20-14:40	Flotation | Chemistry	**Estimation of dynamic sulfide mineral oxidation in industrial flotation processes** K. C. Corin[1], Z. Ekmekçi[2], E. Saari[3], P. Brito Parada[4], B. Musuku[5], I. Nogueira[6], K. Heiskanen[7] *[1]University of Cape Town, [2]Hacettepe University, [3]Metso Finland Oy, [4]Imperial College, London, [5]Boliden Kevitsa Mine Oy, [6]Norwegian University of Science and Technology, [7]Aalto University, [1]South Africa, [2]Turkey, [3]Finland, [4]UK. , [5]Finland, [6]Norway, [7]Finland*
14:40-15:00	Break	Afternoon Refreshments
15:00- 15:20		
15:25-15:45		
15:50-16:10		
16:15-16:35		
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 4:
Physical Separation | Production Accounting
Venue: 2.41-2.43

	Session Sponsored by: IMEXSAR DMS Ferrosilicon	
Time	Theme / Session	Presentation
		Session Chair: M. Tavares, Universidade Federal do Rio de Janeiro, Brazil
08:45-09:05	Keynote Address	**Eco-Efficient Comminution and sustainable sroduction Route: The role of dry stirred mill technology** H. Benzer *Hacettepe University, Turkey*
09:10-09:30	Physical Separation | Dense Medium Separation	**Stability improvement in a dense medium cyclone using an applied magnetic field** Q.P. Campbell[1,2], C. Antonio[1], D. Lay[1], M. le Roux[2] *[1]Julius Kruttschnitt Mineral Research Centre, [2]University of Queensland, Indooroopilly, [2]North-West University, [1]Australia, [2]South Africa*
09:35-09:55	Physical Separation | Dense Medium Separation	**The effect of mineralogy and particle properties on gravity gold recovery: Insights from XCT and QEMSCAN characterisation** M. Magassoubaa, B, M. Beckerb, S. Burnessb, A. Mulelub, L. Bam, P. Bepswa, A.N. Mainza
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: *C. Sampaio*
10:15-10:35	Physical Separation | Gravity Separation	**Development of a process flowsheet for fine chrome tailings** R. Mariba[1], A. Singh[1], Prof V Sibanda[2] , G. Marape[1] *[1]Mintek, [2]University of the Witwatersrand, South Africa*

10:40-11:00	Physical Separation | Gravity Separation	**Insights on separation mechanisms of iron ore in the lamellae of a Reflux classifier using CFD-DEM** H. A. Petit, L. M. Tavares *Universidade Federal do Rio de Janeiro, Brazil*
11:05-11:25	Physical Separation | Gravity Separation	**Multiphase modelling of lamella hydrodynamics in a lamella classifier: Single-inclined-channel experiments and cfd in ansys fluent** W.P. Roux, N. Naude *University of Pretoria, South Africa*
11:30-11:50	Physical Separation | Gravity Separation	**Investigation of product quality improvement in a hematite tailing recovery plant using magnetic separation, flotation, and gravity methods** M. Zareeghajari, M. Mohammadinejadbahar, S. M. Saghaeian, M. V. Sheikhzadeh *Fakoor Sanat Tehran Company, Iran*
11:55-12:15	Physical Separation | Gravity Separation	**Optimizing spiral design for improved throughput and metallurgical performance** C.M. Ramotsabi
12:15:13:15	Break	Lunch
		Session Chair: K. Galvin, University of Newcastle, Australia
13:30-13:50	Physical Separation | Gravity Separation	**The effect of Hydrodynamic Properties of complex Li-slag Particles on Gravity Separation** F. Strube, L. Pereira *Helmholtz-Zentrum Dresden-Rossendorf, Helmholtz Institute Freiberg, Germany*
13:55-14:15	Physical Separation | Gravity Separation	**A new pathway for preparing minerals for downstream processing** T.A. Tildsley, D. Awuye, K.P. Galvin *University of Newcastle, Australia*
14:20-14:40	Physical Separation | Gravity Separation	**Particulate fluidization characteristics using Geldart A-particles in gas-solid separation fluidized beds** Z. Li[1,2,3], Y. Xu[1,2,3], L. Dong[1,2,3], C. Duan[1,2,3], C. Zhou[1,2,3] *[1]China University of Mining &Technology, [2]China University of Mining & Technology, [3]International Joint Laboratory of Minerals Efficient Processing and Utilization, China*
14:40-15:00	Break	Afternoon Refreshments
15:00- 15:20	Production Accounting | Metal Accounting	**Real-time Elemental Analysers: A history of measuring unrepresentative sample streams to a future of real-time metallurgical accounting** K. Keet, R. Novaes *FLS, South Africa*
15:25-15:45	Production Accounting | Metal Accounting	**Governance without execution: Metal accounting non-compliance across west and southern african gold operations** A. Kleynhans, D. Stone *Metal Management Solutions (MMS), South Africa*

15:50-16:10	Production Accounting | Sampling	**Quantification of Sampling improvement by replacing stationary cutter with a launder sampler** W.P. Slabbert *Multotec Process Equipment, South Africa*
16:15-16:35	Production Accounting | Sampling	**Scavenging diamonds: The use of diamond numeracy and plant statistics to estimate the handling and liberation of tailings mineral resource** B. Mabogoame[1], M. Makoba[1], M. Daniel[3], K. Molefe[2], S. Williams[1], K. Daniel[3], T.A. Mamvura[1] [1]University of Botswana, Botswana, [2]Debswana Diamond Company, Botswana [3]CMD Consulting Pty Ltd, Australia
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 5:
Extractive Metallurgy 1
Venue: 1.63-1.64

Time	Theme / Session	Presentation
		Session Chair: *N. du Preez, CM Solutions Metlab, South Africa*
08:45-09:05	Keynote Adddress	**Where geometallurgy meets extractive metallurgy** M. Tadie, *Stellenbosch University, South Africa*
09:10-09:30	Extractive Metallurgy | Hydrometallurgy	**Impact of direct CO^2-induced precipitation on dewatering performance of rare earth element(s) carbonates** J. Chivavava, J. Petersen, A.E. Lewis *University of Cape Town, South Africa*
09:35-09:55	Extractive Metallurgy | Hydrometallurgy	**Magnesium removal from a manganese electrowinning circuit by Mg(NH4)2SO4 crystallisation and MnCO3 precipitation** B. van Veenhuyzen[1,2], M. Shakwane1, T. Punt[2], R.F. Sandenbergh[2] [1]*Manganese Metal Company*, [2]*University of Pretoria, South Africa*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: T. Nghipulile Namibia University of Science and Technology, Namibia
10:15-10:35	Extractive Metallurgy | Hydrometallurgy	**Economic and Technical Evaluation of Potassium Recovery from K-Feldspar Acidic Leach Solutions** S. Shakibania, L. Sundqvist-?qvist, S. Javanshir, J. Rosenkranz *Luleå University of Technology Sweden*
10:40-11:00	Extractive Metallurgy | Hydrometallurgy	**Beneficiation and phosphorus removal of oolitic ores via combined additive-assisted roasting, magnetic separation, and acid leaching** A. Soltanizadeh, N. Esmaeili, M. Zareeghajari, S. M. Saghaeian, M. V. Sheikhzadeh *Fakoor Sanat Tehran Company, Iran*

11:05-11:25	Extractive Metallurgy | Hydrometallurgy	**Sustainable recovery of high-purity V205 from sulfuric acid manufacturing spent catalysts via mild hydrometallurgical processing** N. Singh[1,2], J.Y. Lee[1,2] *[1]Korea Institute of Geoscience and Mineral Resources (KIGAM), [2]University of Science and Technology (UST), Korea*
11:30-11:50	Extractive Metallurgy | Hydrometallurgy	**Evaluation of roast-leach and direct organic acid leaching approaches for recovery of v and ti from titanomagnetite slag** T. Ngwenya, J. Petersen, C.T. Mangunda, T. Mokone *University of Cape Town, South Africa*
11:55-12:15	Extractive Metallurgy | Hydrometallurgy	**Lithium recovery from simulated battery recycling effluents using cation exchange resin: A selective desorption approach** A.M. Salces, N. Kelly, A. Vanderbruggen, M. Rudolph, S. Virolainen, A. Chagnes, A.B. Patil *Helmholtz Zentrum Dresden Rossendorf (HZDR), Helmholtz Institute Freiberg for Resource Technology (HIF) Germany*
12:15:13:15	Break	Lunch
13:30-14:40	Hydrometallurgy Workshop- Venue: Roof Terrace	
14:40-15:00	Break	Afternoon Refreshments
15:00- 16:35	Hydrometallurgy Workshop- Venue: Roof Terrace	
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 6:
Extractive Metallurgy 2
Venue: 2.44-2.46

Time	Theme / Session	Presentation
		Session Chair: S. Tsebe, Metix-SMS Group, South Africa
08:45-09:05	Keynote Address	**Hydrometallurgy vs Flotation: The correspondence between dissolution and flotation** F. Crundwell *CM Solutions, South Africa*
09:10-09:30	Extractive Metallurgy | Hydrometallurgy	**Leaching behaviour and chemistry of rare earth carbonatite ore bodies from Fen deposit** J.K. Nyembwe, A. Kanojia, M. Petranikova, C. Ekberg, *Chalmers University of Technology, Sweden*
09:35-09:55	Extractive Metallurgy | Hydrometallurgy	**Performance assessment of high-activity activated carbon in gold adsorption at a tailings retreatment plant** D. Verwey, , M. Dzivhani, W.A. Ngobeni *BME Metallurgy, A Division of the Omnia Group. South Africa*

09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: L. Chipise, MetSoP, South Africa
10:15-10:35	Extractive Metallurgy | Hydrometallurgy	**Development of a process based on arsenic-fixing roasting to treat refractory gold concentrates** A.Ye. Senchenko, A.V. Aksenov, S.G. Rybkin, D.V. Okoneshnikovb *[1]Institute TOMS LLC, Russia*
10:40-11:00	Extractive Metallurgy | Hydrometallurgy	**Improved oxygen availability for gold leaching using artificial oxygen carriers: Preliminary studies** A. Saim, C. Owusu, G. Ofori-Sarpong, R. Amankwah *Minerals Engineering Department, University of Mines and Technology, Ghana*
11:05-11:25	Extractive Metallurgy | Hydrometallurgy	**Processing high copper gold-bearing ore with the use of glycinate-cyanide leaching**
11:30-11:50	Extractive Metallurgy | Hydrometallurgy	**Selective oxidation roasting for enhanced recovery of spent lithium iron phosphate batteries: mechanism study and process optimization** Wen, GD
11:55-12:15	Extractive Metallurgy | Hydrometallurgy	**Evolution of direct reduction characteristics of composite pellets employing beneficiated blast furnace flue dust as a reductant for sustainable dri making** D.K. Sahu[1], G.G. Roy[2], S.K. Biswal[3], D. Nayak[1] *[1]CSIR-Institute of Minerals and Materials Technology, [2]Indian Institute of Technology Kharagpur, [3]International PranaGraf Mintech Research Centre Bhubaneswar, India*
12:15:13:15	Break	Lunch
13:30-14:40	Hydrometallurgy Workshop- Venue: Roof Terrace	
14:40-15:00	Break	Afternoon Refreshments
15:00- 16:35	Hydrometallurgy Workshop- Venue: Roof Terrace	
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 7:
Bio-processing | Future Mining, Sustainable Development
Venue: 1.41-1.42

Time	Theme / Session	Presentation
		Session Chair: A. Santos, Natural History Museum, United Kingdom
08:45-09:05	Keynote Address	Kari Heiskanen – TBC
09:10-09:30	Bio-Processing | Bio-Hydrometallurgy	**Processing of aged beneficiation tailings by bioleaching to extract non-ferrous metals and ferrous sulfate** A.A. Goryachev

09:35-09:55	Bio-Processing | Bio-Hydrometallurgy	**Evaluation of hydrometallurgical processing routes for low-grade PGM ores and wastes** M.T. Golel, S. Mxinw, S.W. Robertson, D.N. Nxumalo A. *Kotsiopoulos, Mintek, South Africa*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: N. Plint, Mining3, Australia
10:15-10:35	Bio-Processing | Bio-Hydrometallurgy	**Enhanced Chalcopyrite Bioleaching Using a Mesophilicâ€"Thermophilic Microbial Consortium under Heap-Leaching Conditions** B Taherian, S Harrison
10:40-11:00	Future Mining & Processing | New Minerals	**Lithium extraction from α-spodumene and lepidolite concentrates from Manono deposit through roasting with potassium hydrogen sulfate (KHSO4) followed by water leaching** A. Tshibanda, M. Shengo, P. Mambwe, L. Mujinga, A. Leonard, S. Gaydardzhie
11:05-11:25	Future Mining & Processing | New Minerals	**Recovery of lithium from clay leach liquors via solvent extraction** C. Haller, C. Dorfling, A. Chagnes *Stellenbosch University, South Africa*
11:30-11:50	Future Mining & Processing | New Minerals	**Beneficiation of spodumenic rock from lade, kwara state, nigeria for recovery of lithium and some other critical minerals** K.J. Olatunji, O.O. Omole, H.B. Ibrahim, A.F. Abdulwahab, M. Soliu, G. Appolus, T.P. Olaniyi *Institute of Technology, Kwara State Polytechnic*
11:55-12:15	Future Mining & Processing | New Minerals	**Improving the liberation and recovery of lithium, tantalum, and niobium from LCT pegmatites through selective fragmentation** E. M. Murhula[1,2], S.K. Tripathy[1,3], L. Filippo1a *[1]Université de Lorraine, CNRS, France* *[2]Queen's University, Canada* *[3]University of Minnesota, Coleraine, [1]France, [2]Canada, [3]United States*
12:15:13:15	Break	Lunch
		Session Chair: S.C. Chelgani, Lulea University of Technology, Sweden
13:30-13:50	Sustainable Development | Environmentally Responsible Processing	**Integrating social mapping and GIS to strengthen community participation in decision-making for rehabilitating legacy mines** M. Suelto[1], D. Alonzo[2], I.M. Dalona[3], R. Armstrong[4], A. Beltran[5], A. Orbecido[5], C.B. Tabelin[3], M. Villacorte-Tabelin[3], M.A. Promentilla[5], P.R. Brito-Parada[6], Y. Plancherel[6], A.D. Jungblut[4], A. Santos[4], P.F. Schofield[4], V.J. Resabal[3], J. Pocaan[5], P.F. Pisda[5], R. Herrington[4] *[1]University of the Philippines Mindanao, [2]University of New South Wales Sydney, [3]Mindanao State University – Iligan Institute of Technology, [4]Natural History Museum, [5]De La Salle University [6]Imperial College London, [1]Philippines [2]Australia 3Philippines, [4]United Kingdom, , [5]Philippines, [6]United Kingdom*
13:55-14:15	Plant Design | Integrated Flowsheets	**Pilot plant test data management for design of lithium ore processing in the frame of zero-waste mining** S. Brochot, M. Gonzalez, L. Filippov *CASPEO, France*

14:20-14:40	Sustainable Development | Sustainable Mining	**State of the art for in-place mining** J Sweet[1], B Hurtubia1, L Marin[1], F del Pozo[2] *[1]Mining3, [2]Vantaz, [2]Los Militares 5953, [1]Australia, [2]Chile*
14:40-15:00	Break	Afternoon Refreshments
15:00- 15:20		
15:25-15:45		
15:50-16:10		
16:15-16:35		
16:35	Programme Close	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 8:
Sustainability
Venue: 2.64-2.66

Time	Theme / Session	Presentation
08:45-09:05	Keynote Address	**Critical Metals for a sustainable future** N. Plint *Mining3, Australia*
09:10-09:30	Sustainable Development | Sustainable Development	**The controlled preparation of graphite from low-rank coal and its electrochemical performance as anode material for lithium-ion batteries** Z. Yao[1,2], Y. Liu[1,2], T. Xu[1,2], Y. Xie[1,2], C. Duan[1,2], C. Zhou[1,2], L. Dong[1,2] *[1]International Joint Laboratory of Minerals Efficient Processing and Utilisation, Ministry of Education, [2]China University of Mining and Technology, Xuzhou, China*
09:35-09:55	Sustainable Development | Environmentally Responsible Processing	**Advanced thermophysical treatment of carbon paste for high-performance carbon-graphite electrodes** K.A. Krylov[1], F.Yu. Sharikov[2], V.Yu. Bazhin[1], Ch. Duan[1] *[1]University of Mining and Technology, [2]Saint Petersburg Mining University, [1]China, [2]Russia*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: S. Franca
10:15-10:35	Sustainable Development | Integrated Management for Water & Waste	**Effect of residual polyacrylamides on the flotation circuit performance: Mechanisms, process impacts and water treatment strategies** M. Jouini, A. Khalil, Y. Taha, I. Demers, C.M. Neculita, M. Benzaazoua
10:40-11:00	Sustainable Development | Integrated Management for Water & Waste	**Effect of crystallization behavior and phase evolution on glass-ceramics with addition high content tungsten tailings** T. Peng, W. Chen, Z. Gao

11:05-11:25	Sustainable Development | Integrated Management for Water & Waste	**The effects of technosols produced from mineral processing downstream material in the early stage of E. Teff development** D.M. Maluleke, J.A. Filho, J.L. Broadhurst, E. Chopiso, Z. Ludidi, S.T.L. Harrison
11:30-11:50	Sustainable Development | Integrated Management for Water & Waste	**Evaluating geosynthetic liner alternatives for boric acid plant ponds: A trade-off study at the boron site** S. Yazdanpanah, Y. Bourdon, M. Morris
11:55-12:15	Sustainable Development | Integrated Management for Water & Waste	**Preparation of low-carbon cementitious binders via synergistic activation of phosphogypsum and red mud** S. Bao, M. Tong, Y. Zhang, X. Ma, B. Chen *Wuhan University of Technology, China*
12:15:13:15	Break	Lunch
		Session Chair: K. Corin. University of Cape Town, South Africa
13:30-13:50	Sustainable Development | Integrated Management for Water & Waste	**Multi-criteria decision analysis of tailings processing alternatives for celestine** Mesa, V. Gowda, K. Bhadani, G. Asbjrnsson, N. Ariza-Rodreguez, P. R. Brito-Parada
13:55-14:15	Sustainable Development | Integrated Management for Water & Waste	**Water aspect assessment and rehabilitation approach of a legacy mine in the Philippines through Bio+Mine Project** A. B. Beltran[1], J.P. Pocaana[2], A.H. Orbecido[1], M.A.B. Promentilla[1], R.M. Tanhueco[1], C.B. Tabelin[3], P.R. Brito-Parada[4], A. Santos[5], A.D. Jungblut[5], V.J.T. Resabal[3], M.C. Suelto[6], D. Alonzo[7], I.M. Dalona[3], R. Armstrong[5], M. M. Villacorte-Tabelin3, Y. Plancherel4, P.F. Schofield[5], R. Herrington[5] *[1]De La Salle University, [2]Science Education Institute, [3]Mindanao State University – Iligan Institute of Technology, [4]Imperial College London, [5]The Natural History Museum, [6]University of the Philippines, [7]University of New South Wales, 1,2,3,6Philippines, [4,5]United Kingdom, 7Australia*
14:20-14:40	Sustainable Development | Integrated Management for Water & Waste	**Evaluation of high voltage pulse technology for mine waste valorisation** D. Lay, C. Antonio, A.P.N. Fox *JKMRC - SMI, The University of Queensland, Australia*
14:40-15:00	Break	Afternoon Refreshments
15:00- 15:20		
15:25-15:45		
15:50-16:10		
16:15-16:35		
16:35	End of Programme	
18:15-22:00	Congress Banquet – CTICC Halls 5 & 6	

Parallel Session 9:
Future Mining
Venue: 1.43-1.44

Time	Theme / Session

		Session Chair: *K. Brooks*
08:45-09:05	Keynote Address	**Advancing predictive tools for comminution: Real-time granular flow modelling to optimise SAG/AG milling efficiency** I. Govender, IFC Energies, *South Africa*
09:10-09:30	Future Mining & Processing | Big Data	**Model-based soft sensors for real-time monitoring and optimisation of grinding circuits** T. Ledezma, M. Hilden, G. Forbes, C. Z. Bedoya, M. Yahyaei *University of Queensland, Indooroopilly, Australia*
09:35-09:55	Future Mining & Processing | Big Data	**Enabling the comminution booster: PSA sensors, MagoSense and MagoLoad** B. de Haas[1], M. Kuckart[1], C. Rohwer[2] *[1]Magotteaux International SA, [2]Stone Three Digital [1]Belgium, [2]South Africa*
09:55-10:15	Break	Mid-Morning Refreshments
		Session Chair: S. Neethling, Imperial College Londo, United Kingdom
10:15-10:35	Future Mining & Processing | Big Data	**Advanced process control for mass pull optimization incorporating real-time froth and pulp measurements: An industrial case study** B. Odendaal,[1] M. Olivier[1], B. Charandura[2], M. Moyo[2], L. Auret[1] *[1]Stone Three, [2]Mimosa Mining Company, [1]South Africa [2]Zimbabwe*
10:40-11:00	Future Mining & Processing | Big Data	**Reimagining quality control in coal beneficiation: The predictive information control analytics system at Exxaro's Grootegeluk Mine** J. du Plessis[1], W. du Plessis[2], N. Naude[2] [1]Grootegeluk Coal Mine, Exxaro, [2]University of Pretoria, South Africa
11:05-11:25	Future Mining & Processing | Big Data	**Real-time optimisation of a flotation bank** A. Higginson, K.S. Brooks, D. Bouttell, *University of the Witw.atersrand, South Africa*
11:30-11:50	Future Mining & Processing | Big Data	**Real-time inference of froth stability: Froth wetness state from froth sensors** A. Malan, B. Odendaal, A. Haasbroek, L. Auret *Stone Three, South Africa*
11:55-12:15	Process Modelling & Control | Simulation and Modelling	**Modelling and integrated simulations of an industrial iron ore comminution circuit** S. van Huyssteen, N.B. Du Preez, F.K. Crundwell *CM Solutions Metlab, South Africa*
12:15:13:15	Break	Lunch
		Session Chair: K. Keet, FLS, South Africa
13:30-13:50	Process Modelling & Control | Simulation and Modelling	**Real-time prediction of blaine surface area of iron ore from industrial ball milling with physics-informed neural network** T.M. Campos[1], H.A. Petit[1], R.O. Freitas[2], L.M. Tavares[1] *[1]Universidade Federal do Rio de Janeiro – COPPE/UFRJ, 2Vale S.A., Brazil*

13:55-14:15	Future Mining & Processing | Big Data	**Modelling and integrated simulations of an industrial iron ore comminution circuit** B.K.N. Rocha[1], TM. Campos[1], J. Silva[2], L.M. Tavares[1] *[1]Universidade Federal do Rio de Janeiro – COPPE/UFRJ, [2]Anglo American, Brazil*
14:20-14:40	Process Modelling & Control | Simulation and Modelling	**Modelling and simulation of primary grinding circuit in lkab malmberget concentrating plant** *J. Escalante[1], M. Parian[1], T.V.P. Aquino[2], E. Öberg[2]* *[1]Luleå University of Technology, [2]Research and Development (R&D), Luossavaara-Kiirunavaara Aktiebolag (LKAB), Sweden*
14:40-15:00	Break	Afternoon Refreshments
		Session Chair: S. Grobbelaar, Dynamet Insights, South Africa
15:00- 15:20	Process Modelling & Control | Simulation and Modelling	**Dynamic simulation of concentrators with specific emphasis on optimizing buffers and process continuity** A.A. Lebedev *Lebedev Consulting, South Africa*
15:25-15:45	Process Modelling & Control | Simulation and Modelling	**Dynamic simulation of comminution in jaw crushers** P.K. Niebel[1], P. Landgraf[1], P. Eitz[1], H. Lieberwirth[1], C. Eichler[2] *[1]TU Bergakademie Freiberg, Institute for Mineral Processing Machines and Recycling Systems Technologies, [2]DyssolTEC GmbH, Germany*
15:50-16:10	Process Modelling & Control | Simulation and Modelling	**The validation of power draw from bond ball work index using real-time energy measurements** A. Mutangi, P. Madziwa, Yukai. Wu, S. Bremner, Guoqiang. Wang, C. T. O?Connor, Yangge. Zhu, K. C. Corin
16:15-16:35	Process Modelling & Control | Simulation and Modelling	**Validation of DEM predicted axial free surface in a tumbling mill using PEPT** *M. Richter and A.N. Mainza, I. Govender*
16:35		End of Programme
18:15-22:00		Congress Banquet – CTICC Halls 5 & 6

Parallel Session 10:
GCC & Hydrometallurgy Workshop
Venue: Roof Terrace

09:00-12:00		GCC Workshop
12:30-13:30	Break	Lunch
13:30-16:30		Applying Hydrometallurgical Principles to Metal Recovery from Secondary Resources
16:30		End of Programme
18:15-22:00		Congress Banquet – CTICC Halls 5 & 6