Wednesday 18th November

17.30-19.00 **Registration and drinks reception, with hot and cold canapés**
Accompanying guests welcome

Thursday 19th November

07.30 Registration desk opens
Light breakfast, tea, coffee and fruit juice

08.30 Welcome to Critical Minerals '26
J. Wills (MEI, UK)

08.40 *Technical Session 1*
Chairpersons: A. Singh (Mintek, South Africa) and Q. Huang (West Virginia University, USA)

08.40 **Keynote Lecture: Sustainable biotechnology platform for mineral recovery**
G. Yang, Y. Li, S.R. Devkota, R. Zhao and Chun-Xia Zhao (Adelaide University, Australia)

09.10 **Advances in beneficiation of critical European lithium ores**
Jussi Liipo, A. Aaltonen, D. Bilal (Metso Research Center, Finland), K. Bru (BRGM, France), K. Komnitsas, E. Petrakis, O. Pantelaki and V. Karmali (Technical University of Crete, Greece)

09.30 **Understanding the role of metal cations in spodumene flotation: from solution chemistry to surface chemistry**
Espoir M. Murhula, C.E. Gibson (Queen's University, Canada) and L. Babedi (Queen's University, Canada and Camborne School of Mines, UK)

09.50 **Ultrasonic-assisted leaching of carbonate–clay hosted lithium minerals: effect of acid type and process parameters**
Cristian S. Araya (Universidad Católica del Norte, Chile and University of Lincoln, UK), H. Ghaedi, H. Reeves and Y. Ghorbani (University of Lincoln, UK)

10.10 Coffee

11.00 **Selective lithium recovery from carbonate–clay hosted minerals using urea–methanesulfonic acid deep eutectic solvents**
Hosein Ghaedi, M.H. Khasdar, Y. Ghorbani (University of Lincoln, UK) and C.S. Araya (University of Lincoln, UK and Universidad Católica del Norte, Chile)

11.20 **Thermodynamic modeling of selective Li_2CO_3 precipitation from post-DLE oilfield-brine eluates in North America**
Lucas Couderc-Avignon (Lithium for America, USA)

11.40 **An integrated processing scheme involving roasting-hot water leaching with subsequent IX/SX steps to produce lithium carbonate from Li-bearing boron processing wastes**
F. Boylu, B. Yüce, D. Uçar, Mehmet S. Çelik (Istanbul Technical University, Türkiye), M.F. Can (Afyon Kocatepe University, Türkiye), G.E. Angur and C. Ünal (Munzur University, Türkiye)

12.00 **Lithium recovery from wastewater**
Mehdi Safari, M. Sadatipour (Mintek, South Africa) and F.S. Hoseinian (University of the Witwatersrand, South Africa)

12.20 **Evaluation of the potential for REE preconcentration and gangue rejection from monazite ore via physical separation methods**
Nichole Maistry, A. Singh (Mintek, South Africa) and I. Sixhuta (Rigifoam Pty Ltd, South Africa)

12.40 **Lanthanides no more hiding: resource estimation and beneficiation prospects of yttrium and neodymium in an urban deposit**
Iyiola O. Otunniyi (Vaal University of Technology, South Africa)

13.00 Lunch

14.00 *Technical Session 2*
Chairpersons: F. Rau (Helmholtz Institute Freiberg for Resource Technology, Germany) and Q. Kanhukamwe (Harare Institute of Technology, Zimbabwe)

14.00 **Evaluation of reagent schemes for the flotation of rare earth elements**
Francisca K.A. Frutuoso, M.C. Vila, M.L. Dinis (University of Porto, Portugal), E. Levei, I. Török, L. Ferrando-Climent (National Institute of Research and Development for Optoelectronics, Romania) and N. Gajendra (Kjeller, Institute for Energy Technology, Norway)

14.20 Optimisation of flotation parameters using a Design Expert® screening experimental design for rare earths recovery by flotation from phosphogypsum
Thelma Kadiramwando, W.A. Ngobeni, M. Dzivhani (BME Metallurgy, South Africa) and B. Raswiswi (Rainbow Rare Earths, South Africa)

14.40 **Flotation of rare earth elements from phosphogypsum using sulphide collectors with different chemistries**
Walter A. Ngobeni, T. Kadiramwando, M. Dzivhani (BME Metallurgy, South Africa) and B. Raswiswi (Rainbow Rare Earths, South Africa)

15.00 **Mineralogical insights into alkaline-cracked South African coal fly ash towards enhanced rare earth element extraction**
Shinelka Singh, L.C. Makola, N. Sehlotho, D. Chetty and M. Manuel (Mintek, South Africa)

15.20 Coffee

16.00 **Rare earth element recovery from coal and coal-derived ashes: occurrence, leachability, and beneficiation potential**
Msizi Mkhize, S. Bada (University of the Witwatersrand, South Africa) and N. Wagner (University of Johannesburg, South Africa)

16.20 **Influence of coupled pH-Redox conditions on rare earth element and iron extraction from discard coal-derived leach solutions using Cyanex 572**
Agnes M. Modiga (Mintek and University of the Witwatersrand, South Africa), O. Bazhko (Mintek, South Africa), S. Bada (University of the Witwatersrand, South Africa) and M. Bambo (Vaal University of Technology, South Africa)

16.40 **Flotation separation of copper and nickel sulfides by polysaccharide depressants**
Negin P. Manjili, D. Wang, H. Zeng and Q. Liu (University of Alberta, Canada)

18.30 Coaches leave Vineyard Hotel for conference dinner at Wild Fig Restaurant

Friday 20th November

08.30 Registration desk opens
Light breakfast, tea, coffee and fruit juice

09.00 *Technical Session 3*
Chairpersons: L. Couderc-Avignon (Lithium for America, USA) and Y. Ghorbani (University of Lincoln, UK)

09.00 **Keynote Lecture: Replacing copper with aluminium is the most effective way to deal with the looming global copper shortages**
Martin Lynch (University of Queensland, Australia)

09.30 **Pyrite-to-pyrrhotite transformation: an unconventional approach to critical metal recovery**
Lexi Kng, O. Mejías, X. Ma, A. Parbhakar-Fox (University of Queensland, Australia), H. Degeling (Mining3, Australia), A. Tong, A. Randall and H. Porteous (Cobalt Blue Holdings, Australia)

09.50 **Selective comminution of Fe–Ti–V bearing ores for more efficient critical mineral processing**
Christiana Oyinloye, S. Luukkanen, S. Hartikainen, N. Paasovaara, A. Wicaksono (University of Oulu, Finland), D. Krawczykowsk, D. Saramak, D. Foszcz, A. Krawczykowska, W. Zygo (University of Kraków, Poland), M. Markkanen and T. Chernet (Geological Survey of Finland, Finland)

10.10 **Selective recovery of rare earth elements from acid mine drainage using a sulfonic acid ion-exchange resin: a pathway to cleaner critical material sourcing**
T.S. Naidu (University of Copenhagen, Denmark and University of the Witwatersrand, South Africa), E.K. Hardwick (University of the Witwatersrand and Cwenga Technologies, South Africa), J.G. Falconer (Cwenga Technologies, South Africa), Craig M. Sheridan (University of the Witwatersrand, South Africa) and P.E. Holm (University of Copenhagen Denmark)

10.30 Coffee

11.20 **Development of high-purity caustic calcined magnesia for critical minerals hydrometallurgical processing**
Maisa Alves, M. Naves, T. Ribeiro (RHI Magnesita, Brazil) and C. Poelzl (RHI Magnesita, Austria)

11.40 **Can we apply a geometallurgy approach to recycling for critical minerals and metals?**
Andrew Menzies (Bruker Nano Analytics GmbH, Germany), L. Donnelly (Alfred H. Knight International Ltd, UK), D. Pirrie (Helford Geoscience LLP, UK) and M. Power (Vidence Inc., Canada)

12.00 **Gold recovery from mobile phones printed circuit boards (PCBs) using two stage leaching and direct water loading precipitation from the leachate**
Aaron Mukuya and Q. Kanhukamwe (Harare Institute of Technology, Zimbabwe)

12.20 **Critical mineral recycling from end-of-life fuel cells for circular energy systems**
Qingqing Huang and F. Razazan (West Virginia University, USA)

12.40 Lunch

14.00 *Technical Session 4*
Chairpersons: I.O. Otunniy (Vaal University of Technology, South Africa) and L. Kng (University of Queensland, Australia)

14.00 **The bankability gap: process-intensified, first-of-a-kind circular battery flowsheets—technology readiness level to final investment decision**
Mervyn Stevens (Worley Europe Ltd., UK)

14.20 **Innovative recycling pathways for lithium-ion batteries: advances in hydrometallurgy and separation technologies**
Aexandra Chagnes (Université de Lorraine, France)

14.40 **Precipitation of rare earth elements in materials recycling**
Kerstin Forsberg (KTH Royal Institute of Technology, Sweden)

15.00 **Recovery of rare earth elements from spent computer hard disks using phosphoric acid leaching and deep eutectic solvent leaching of the REEs rich solid residue**
Simbarashe Fashu (Harare Institute of Technology, Zimbabwe and University of KwaZulu-Natal, South Africa)

15.20 Coffee

16.00 **Life cycle assessment of mixed rare earth oxide recovery from end-of-life NdFeB magnets: a Vietnamese case study**
C.-Y. Yin (Vin University, Vietnam)

16.20 **Towards technology metals from electronic waste: a contribution to the relationship between liberation and size reduction**
Florian Rau, K. Syguschand and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)

16.40 **Towards technology metals from electronic waste: current state of a WEEE recycling facility for scientific investigations of process flexibility**
Florian Rau, K. Sygusch, T. Seifert, T. Jordan, A. Storch, F. Ballani, F. Töpfer, T. Storch, R. T. Delgado, M. Rudolph and G. van den Boogaart (Helmholtz Institute Freiberg for Resource Technology, Germany)

17.00 Closing remarks and invitation to Critical Minerals '28
A.J. Wills (MEI, UK)

17.10 Farewell function in hotel gardens Accompanying persons welcome