

BATTERY MATERIALS CONFERENCE 2022

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MULDERSDRIFT, JOHANNESBURG



SAIMM
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OF MINING AND METALLURGY



ABSTRACTS RECEIVED

Supply chain criticality for the Battery Materials market

N. Backeberg, *Cape Geo, South Africa*

Process Flow Alternatives for LIB Recycling

B. Friedrich, *RWTH Aachen University, Germany*

Leaching of Co and Ni from converted nickel pig iron (NPI)

N.A. Barcza and L. Erasmus, *South Africa*

The role of diluents in battery recycling processes

D. Bien, *ExxonMobil, Germany*

Geometallurgical characterisation for provenance verification on blockchain platforms

N.C. Steenkamp, M. van Staden, and G. Bezuidenhout, *GEMET Geometallurgical Consulting, South Africa*

Advanced separation and purification technologies in Direct Lithium Extraction (DLE) application

M. Wu¹, J. Bester¹, D. Gisch², T. Chatterjee², and T. Thulare³, *Dupont, ¹The Netherlands, France, ²USA, and ³South Africa*

High water recovery using Minimal Liquid Discharge (MLD) improves the sustainability of wastewater management in lithium-ion battery production

T. Arrowood, *Dupont, USA*

Removal of iron from vanadium redox flow battery electrolyte by ion exchange

K.C. Sole¹, M. Makonese¹, and A. Enslin², *¹University of Pretoria and ²Bushveld Vametco Alloys, South Africa*

Separation of manganese from cobalt by solvent extraction, with application to the recycling of spent cathode material from lithium-ion batteries

K.C. Sole, L. Siwale, and N. Khuzwayo, *University of Pretoria, South Africa*

Detailed microparticle analyses providing process relevant chemical and microtextural insights into the black-mass

M. Dadé, T. Wallmach, and G. Crumière, *Eramet, France*

Possibilities and limits - of a sustainable recycling concept for lithium batteries

N. Wiczorek¹, J. Hobohm², and G. Chryssos¹, *¹Foundation GRS Batteries and ²GRS Service GmbH, Germany*

Hydrometallurgical recovery of cobalt, nickel, lithium and manganese from spent lithium ion batteries

E.K. Hardwick, L.B. Siwela, and G. Falconer, *Cwenga Technologies, South Africa*

African battery minerals; supply and consumption perspectives

P. Leeuw and M. Nong, *University of the Witwatersrand, South Africa*

The application of low carbon footprint vapor metallurgical processes to the extraction and refining of high purity vanadium (and value co-products)

D. Terekhov¹, C. van der Linde¹, and E. Nel², *¹TCM Research Limited and ²Vanadium Resources Limited, South Africa*

New improved nanofiber material for the recovery of metals from spent lithium-ion batteries

J. Mukaba, O. Perea, B.J. Bladergroen, and L. Petrik, *University of the Western Cape, South Africa*

Development of a novel hydrometallurgical process using citric acid for lithium-ion battery recycling

T. Punt, S. Bradshaw, A.P. van Wyk, and G. Akdogan, *Stellenbosch University, South Africa*

Build A Sustainable Future for Critical Battery Materials Based on Carbon-Neutrality

X. Lin, X. Wang, and H. Wu, *Botree, China*