

**SOUTHERN
AFRICAN**

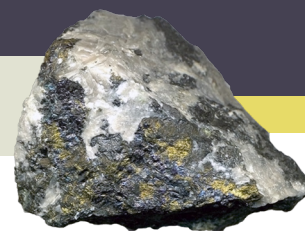
RARE EARTHS

2ND INTERNATIONAL CONFERENCE 2024

**18 JUNE 2024 - WORKSHOP
19-20 JUNE 2024 - CONFERENCE**

**SWAKOPMUND HOTEL AND ENTERTAINMENT CENTRE,
SWAKOPMUND, NAMIBIA**

Global Impact and Sustainable Supply



PRELIMINARY PROGRAMME

Tuesday 18 June 2024

Workshop – Rare Earth Elements

- 08:00 Registration Opens and Early Morning Refreshments
- 08:30 Workshop starts
- 16:00 Workshop ends
- 17:00-19:00 Welcome Cocktail and Early Registration

Conference Day 1-Wednesday, 19 June 2024

- 08:00-08:30 Registration
- 08:30-08:35 Welcome and Opening
R. Hassanalizadeh, *Conference Chairperson*
- 08:35-08:40 Safety Briefing
Venue Official
- 08:40-09:10 Address by Mining Commissioner
I. Chirchir, *Ministry of Mines and Energy, Namibia*

Session 1: Exploration, geology, and mining of selected REE ore deposits in Africa

- Session Chairperson: J. Agenbag, *Mineral Technologies, South Africa*
- 09:10-09:40 Keynote Address: Mary Kathleen tailings derived rare earth concentrates via double salt precipitation and caustic conversion
Y. Guan, V. Loureiro, U. Sultana, and J. Vaughan, *The University of Queensland, Australia*
 - 09:40-10:00 The assessment of rare earth elements in borehole cores from the Ermelo, Witbank and Waterberg Coalfields, South Africa
D.G. Modiba and N.J. Wagner *University of Johannesburg, South Africa*
 - 10:00-10:20 The magnet era of rare earths - how it started, where it is going, and what hurdles lay ahead
K. Matlou, *Project Blue, South Africa*
 - 10:20-10:40 **Morning Tea Break**
 - 10:40-11:00 Challenges and opportunities for rare earth element mining in underground mines
L. Schaarschmidt, H. Mischo, and R. Ellmies, *Technical University Freiberg Gecko Exploration Pty. Ltd., Namibia, Namibia Critical Metals Inc, Germany, Namibia, Canada*

- 11:00-11:20 Stratigraphic distribution of rare earth elements within the Soutpansberg coalfield, Tshipise sub-basin, South Africa
R.W. Hlungwane, O.M. Moroeng and N.J. Wagner, *University of Johannesburg, South Africa*
- 11:20-11:50 Keynote Address: How well does the great demand for rare earths translate into a great business for producers?
P. Van Staden, *South Africa*
- 11:50-12:10 The Triassic coal deposits in Lesotho as an alternative source of rare earths
S.A. Hlajoane and L.S. Mokhahlane, *University of the Witwatersrand, South Africa*
- 12:10-12:30 Overview of the Eisenberg Project in Namibia
K. Bisaka¹, C. Dauti¹, S. Martin¹, and M. Silvanus², *¹Broadmind Mining (Pty) Ltd, South Africa and ²Namibia Geological Services, Namibia*
- 12:10-13:30 **Lunch**

Session 2: Processing and refining

- Session Chairperson: G. Dzinomwa, *Namibia University of Science and Technology, Namibia*
- 13:30-14:00 Keynote Address: REE mineralization in Turkey
O. Çimen, *Munzur University, Turkey*
(Online Presentation)
 - 14:00-14:20 Application of ion exchange technology for the upgrading and purification of the rare earth's elements
O. Bazhko and J. van Deventer, *Mintek, Puro-lite, South Africa*
 - 14:20-14:40 Recovery of rare earth elements from low concentration acidic streams using ion exchange resins
O. Bazhko, J. van Deventer, M. Moshokwa, and R. Wildenboer, *Mintek, Puro-lite, MetC, Rainbow Rare Earths, South Africa*
 - 14:40-15:00 Laboratory scale concentration of low-grade monazite beach sand – a pH dependency study
T. Moodley, R. Hassanalizadeh, and E. Muller, *Mintek, South Africa* **(Online Presentation)**
 - 15:00-15:20 **Afternoon Tea Break**
 - 15:20-15:40 Model development for the ultrasound-assisted alkali-acid leaching of rare earth elements from high ash coal from the Waterberg coalfield
A. Modiga, X.C. Goso, and S. Bada, *Mintek, University of the Witwatersrand, South Africa*

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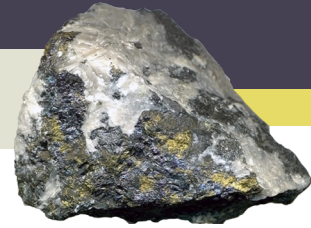
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- 15:40-16:00 Flowsheet development of two distinct rare earth minerals bearing heavy mineral sand ores
E. Raffailac and R.M.G. MachHunter, *Mineral Technologies, Australia*
- 16:00-16:30 Ice Breaker - Quiz
- 16:30 End of Conference Day 1
- 16:30-17:30 Time Leisure
- 17:30-20:00 Conference Dinner

Conference Day 2-Thursday, 20 June 2024

- 08:00-08:30 Registration
- 08:30-08:35 Welcome and Opening
R. Hassanalizadeh, *Conference Chairperson*
- 08:35-08:40 Safety Briefing
Venue Official
Address by Chamber of Mines of Namibia
V. Malango, *Chamber of Mines of Namibia*

Session 3: Recovery from secondary resources

Session Chairperson: B. Xakalashé, *Mintek, South Africa*

- 08:40-09:10 Keynote Address: REEs processing
D. Singh, *IREL, India*
- 09:10-09:30 The flotation of coal discards from the Mpumalanga province to understand the concentration levels of critical raw materials, R M Maphoso, N Malumbazo
B. Vatsha and G. Nwaila, *University of the Witwatersrand, University of Johannesburg, South Africa*
- 09:30-09:50 Quantification of Rare Earth elements (REEs) from coal discards of the Ermelo Coalfield
M.N. Catherine, M. Nandi and N.J. Wagner, *Council for Geoscience University of the Witwatersrand, University of Johannesburg, South Africa*
- 09:50-10:10 Extraction of rare earth elements from Phalaborwa phosphogypsum
R.A. Wildenboer and R.F. Sandenbergh, *Rainbow Rare Earths Pty. Ltd, University of Pretoria, South Africa*
- 10:10-10:30 Morning Tea Break
- 10:30-11:00 Keynote Address:
G. Baskaran, *USA*

- 11:00-11:20 Enrichment of rare earth elements in No. 6 coal seam from the Limpopo Coalfield, South Africa
S. Biswas, N.J. Wagner, and O.M. Moroeng, *University of Johannesburg, South Africa*
- 11:20-11:40 Development of a modular LPX Plant™ for efficient extraction and environmental remediation of mercury-contaminated luminophosphor powders
M.D. Williams-Wynn, *EWaste Africa, South Africa*

Session 4: Processing and refining/ Beneficiation

Session Chairperson: S. Ndlovu, *University of the Witwatersrand, South Africa*

- 11:40-12:00 Strategic considerations in the construction of a rare earth facility in Angola: A comparative analysis of modular construction and traditional stick build approaches
S. Momberg
- 12:00-13:00 Lunch
- 13:00-13:30 Keynote Address: Prospects of Rare Earth resources in Southern India
M. Verma
- 13:30-13:50 Rare earth extraction with ionquest 801
C. Carrozza, F. Dutoy, and M. Bruna Stella, *Italmatch Chemicals Spa, Italy*
- 13:50-14:10 Development of a physical separation pre-concentration process for the extraction of rare earth bearing ore
T. Mokgomola¹, G. Marape¹, A. Singh¹, K. Bisaka¹, and S. Kahovera², *Mintek, South Africa and Broadmind Pty Limited, Namibia*
- 14:10-14:30 Application of a characterisation toolbox for understanding REE distribution in an Ion Adsorption Clay type ore
C.E. Naude, J. Petersen, and M. Becker, *University of Cape Town, South Africa*
- 14:30-14:50 Rare earth elements research conducted at Mintek,
B. Xakalashé, *Mintek, South Africa*
- 14:50-15:00 Conference close