

gadolinium
holmium (Ho)
lanthanum (La)
lutetium (Lu)
neodymium
praseodymium
(Pr), promethium
(Pm), samarium
(Sm), scandium
(Sc), terbium
thulium (Tm)
ytterbium (Yb)
and yttrium

SAIMM ONLINE

CONFERENCE

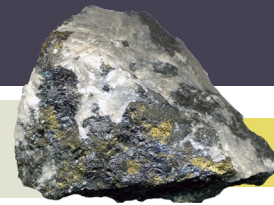
SOUTHERN
AFRICAN

RARE EARTHS

INTERNATIONAL CONFERENCE 2021

18-19 OCTOBER 2021

Driving the future of high-tech industries



Preliminary Programme

Conference Day 1

Monday 18 October 2021

- 09:00 Zoom login open
09:00–09:05 Zoom Logistics
SAIMM
09:05–09:15 Welcome and Opening
E. Matinde, *Conference Chairperson*
09:15–09:30 SAIMM Presidential Address
I.J. Geldenhuys

Session 1: Exploration

Session Chairperson: J. Selby, *Consultant, South Africa*

- 09:30–10:00 Keynote Address: Geology of REE deposits: Experience from Africa and Greenland
J. Harmer, *Rhodes University, South Africa*
10:00–10:20 Potential for rare-earth elements (rees) in the molteno-indwe coalfield, eastern cape province
M. Breakfast, A.O. Kenan, L.S. Kirstein, and T. Mothupi, *Council for Geoscience, South Africa*
10:20–10:40 Summary of the Steenkrampskraal rare earth project in South Africa
T. Blench, *Steenkrampskraal Holdings, South Africa*
11:00–11:20 Review of exploration, mining and environmental management of rare earth elements production in southern Africa
B. Adebayo, *Federal University of Technology, Nigeria*
11:20–11:40 Overview of the Eisenberg Project in Namibia for the extraction of rare earth elements
T. Chabalala¹, S.W. Martin², C.J. Dauti², I.C. Thobadi³, and K. Bisaka⁴, ¹DMT Group, ²Broadmind Mining (Pty) Ltd, ³Mintek, and ⁴Zawadi Business Solutions Pty Ltd
11:40–11:50 Open Discussion
11:50–12:00 Morning Break

Session 2: Processing

Session Chairperson: M. van Rooyen, *Wood PLC*

- 12:00–12:30 Keynote Address: Centralized rare earths processing - unlocking a REE industry in South Africa
P. van Staden, *Mintek, South Africa*
12:30–12:50 Process mineralogy in flowsheet development for rare earth element beneficiation
D. Chetty and W. Clark, *Mintek, South Africa*
12:50–13:10 Metallurgy and Innovation in the extraction of rare earths from the Wigu Hill Carbonatite Complex, Tanzania
A. Harwood, M. Evans, S. Pillay, and R. Mottay, *Montero Mining and Exploration Ltd, Canada and Mintek, South Africa*

13:10–13:20 Open Discussion

13:20–13:50 Lunch Break

Session 3: Secondary Processing

Session Chairperson: R. Hassanalizadeh, *Mintek*

- 13:50–14:20 A study of flotation recovery of rare earth elements minerals from mining tailings using hydroxamic acid as a collector
G.B. Abaka-Wood, J.A. Mensah, and W. Skinner, *University of South Australia, Australia and Namibia University of Science and Technology, Namibia*
14:20–14:40 A detailed investigation into the properties of coal discard stockpiles at Protea Colliery (Mpumalanga Province) with a focus on critical raw materials
N.C. Mniki, N. Malumbazo, and N.J. Wagner, *University of Johannesburg, South Africa*
14:40–15:00 Potential impact of increased recycling on new rare earth element projects
N.C. Steenkamp, N. Scott, and G. Bezuidenhout, *Bowline Professional Services, South Africa*
15:00–15:10 Open Discussion
15:10 Day 1 Conference Close

gadolinium
holmium (Ho)
lanthanum (La)
lutetium (Lu)
neodymium (Nd)
praseodymium (Pr),
promethium (Pm),
samarium (Sm),
scandium (Sc),
terbium (Tb),
thulium (Tm),
ytterbium (Yb)
and yttrium

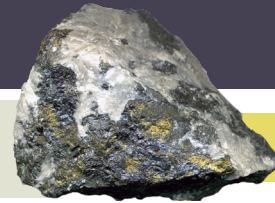
SAIMM ONLINE
CONFERENCE

SOUTHERN
AFRICAN

RARE EARTHS

INTERNATIONAL CONFERENCE 2021

18-19 OCTOBER 2021



Driving the future of high-tech industries

Preliminary Programme

Conference Day 2

Tuesday 19 October 2021

- 09:00 Zoom login open
09:00–09:05 Zoom Logistics, SAIMM
09:05–09:15 **Welcome and Opening**
E. Matinde, *Conference Chairperson*
09:15–09:30 **SAIMM Presidential Address**
I.J. Geldenhuys

Session 4: Environment/Secondary Processing

Session Chairperson: B. Xakalashé, *Mintek*

- 09:30–10:00 **Keynote Address: Managing radioactivity in the rare earths industry**
P. Metcalf, *International Atomic Energy Agency, Austria*
10:00–10:20 **Rare earth elements recovery from waste NdFeB magnets by acid leaching and hematite precipitation under pressure in an autoclave**
E.E. Kaya, C. Dertmann, S. Stopic, S. Gürmen, and B. Friedrich, *RWTH Aachen University, Istanbul Technical University, Turkish-German University, Germany, Turkey*
10:20–10:40 **Opportunities of possible flowsheets for the extraction of REE from ashes and other residues**
T.P. Kekana, I.C. Thobadi, E. Matinde, B. Xakalashé, and K. Bisaka, *Mintek, Zawadi Business Solutions Pty Ltd, South Africa*
11:00–11:20 **The recovery of rare earth elements from coal fly ash**
G.B. Abaka-Wood, J.A. Mensah, and W. Skinner, *University of South Australia, Australia and Namibia University of Science and Technology, Namibia*
11:20–11:40 **Recovery of rare earths from waste resources: Three different case studies**
C.R. Borra, *Indian Institute of Technology-Kharagpur, India*
11:40–11:50 **Open Discussion**
11:50–12:00 **Morning Break**

Session 5: Exploration/Geology

Session Chairperson: N.J. Wagner, *University of Johannesburg*

- 12:00–12:20 **Lofdal Xenotime Deposit, Namibia: Geology, recent exploration results and planned mine development**
R. Ellmies, *Namibia Critical Metals Inc. Canada*

- 12:20–12:40 **Ondoto LREE-Carbonatites, Kunene Igneous Complex Satellite Intrusions, Namibia**
R. Ellmies, V. Haukongo, and K. Ndalulilwa, *Gecko Exploration (Pty) Ltd, Namibia*
12:40–13:00 **Geology and mineralogy of the Wigu Hill Carbonatite Complex, Tanzania**
A. Harwood, M. Evans, R.E. Harmer, *Montero Mining, Canada and Exploration Ltd, and Rhodes University, South Africa*
13:00–13:20 **Recent findings at Eureka**
E. Loye, *E-Tech Resources, Canada*
13:20–13:40 **The assessment of rare earth elements in a borehole core from the Emerlo Coalfield, South**
D.G. Modiba and N.J. Wagner, *University of Johannesburg*
13:40–13:50 **Open Discussion**
13:50–14:20 **Lunch Break**

Session 6: Future Markets/Economics

Session Chairperson: E. Matinde, *Mintek*

- 14:20–14:50 **Keynote Address: Important technical factors that make a rare earth deposit economically mineable and fundable**
T. Harwood, *Montero Mining, Canada*
14:50–15:20 **Keynote Address: How the rare earths become lanthanides again**
C.G. Anderson, *Colorado School of Mines, USA*
15:20–15:40 **Market analysis of the REEs industry towards a global roadmap of carbon neutrality**
N. Backenberg, *Roskill, South Africa*
15:40–16:00 **An appetite for REE: Can the apatite-rich ferrodiorites of the upper zone be a solution to the global REE crisis?**
H. Mandende and T. Mothupi, *Council for Geoscience, South Africa*
16:00–16:20 **Where we were burnt, and what we have learnt some geological insights into the REE investment, promotion and development booms of 2010 to 2012, and today**
P.R. Siegfried, *GeoAfrica Prospecting Services, Namibia*
16:20–16:30 **Open discussion**
16:30 **Closing remarks**
E. Matinde