



[#HiTechMetals18](#)

Wednesday November 21st

- 14.00-15.30 Pre-registration in conference centre
 15.45 Welcoming wine function in hotel gardens (accompanying guests welcome)

Thursday November 22nd

- 08.15 Registration desk opens
 Light breakfast of filled croissants, tea, coffee and fruit juice
- 09.00 Opening Remarks
 B.A. Wills (MEI, UK)
- 09.15 *Technical Session 1*
 Chairmen: S. Graham (Zeiss, UK) and A. Vanderbruggen (Helmholtz Institute Freiberg for Resource Technology, Germany)
- 09.15 **Keynote Lecture: High technology metals: facts, fiction and recycling**
J. Gutzmer, M. Frenzel and M. Reuter (Helmholtz Institute Freiberg for Resource Technology, Germany)
- 10.00 **Recycling of high tech metals for reuse in new technology materials**
N.J. Boxall, K.Y. Cheng (CSIRO Land and Water, Australia) and A.H. Kaksonen (CSIRO Land and Water, and University of Western Australia, Australia)
- 10.30 **Critical raw materials – advanced recycling technologies and processes**
R. Stauber (Fraunhofer ISC, Germany)
- 11.00 Coffee
- 11.45 **e-waste characterization for metal recycling – new application area for automated quantitative mineralogy**
 N. Reinders, H. Bouzazah, E. Pirard, P. Giaro (Université de Liège, Belgium) and S.D. Graham (Carl Zeiss Microscopy, UK)
- 12.15 **A comparison of centrifugal gravity separators for the beneficiation of the Nechalacho REE deposit**
C. Marion, R. Li, R. Langlois, I. Rell, K.E. Waters (McGill University, Canada), T. Grammatikopoulos (SGS Inc, Canada), R. Fitzpatrick (Camborne School of Mines, UK) and T. Mildren (Gravity Mining Ltd, UK)
- 12.45 Lunch
- 14.00 *Technical Session 2*
 Chairman: J. Gutzmer (Helmholtz Institute Freiberg for Resource Technology, Germany)
- 14.00 **Experimental study on the beneficiation of a lateritic rare earth ore by magnetising roasting and magnetic separation**
N. Faris, J. Tardio, S. Bhargava (RMIT University, Australia), R. Ram (Monash University, Australia) and M.I. Pownceby (CSIRO Mineral Resources, Australia)
- 14.30 **A physico-chemical investigation into the flotation of rare-earth minerals**
C. Marion, R. Li, R. Langlois, E. Houlding, S. Johnston and K.E. Waters (McGill University, Canada)
- 15.00 **A new approach in the flotation of monazite using a lanthanum salt as a catalyzer of the carboxylate collector adsorption/activity**
A. Geneyton, L. Filippov, N. Menad (Université de Lorraine, France)
- 15.30 **Leaching rare earth elements from phosphors recovered from end-of-life fluorescent lamps**
L. Bumhira, C. Dorfling and G. Akdogan (University of Stellenbosch, South Africa)
- 16.00 Coffee
- 16.30- Sundowner in Vineyard Gardens
 17.30 Accompanying Guests Welcome

Friday November 23rd

- 08.15 Registration desk opens
Light breakfast of filled croissants, tea, coffee and fruit juice
- 09.00 *Technical Session 3*
Chairmen: J.B. Hiskey (University of Arizona, USA) and N.J. Boxall (CSIRO Land and Water, Australia)
- 09.00 **High-purity lithium carbonate from a montebrasite pre-concentrate: applied mineralogy, pyro- and hydrometallurgy**
P.F.A. Braga, S.C.A. França (CETEM, Brazil) and R. Neumann (CETEM and Universidade Federal do Rio de Janeiro, Brazil)
- 09.30 **Processing of Li pegmatite using combined electrostatic and flotation methods: role of the mineral composition and liberation degree**
L. Filippov, I. Filippova, G. Crumiere (Université de Lorraine, France), R. Sousa, M.M. Leite and A.B. de Sousa (National Laboratory of Energy and Geology, Portugal)
- 10.00 **An investigation into the role of surface chemistry in spodumene flotation**
C. Marion, R. Li, R. Langlois, N. van Noord, O. Kökkiliç and K. Waters (McGill University, Canada)
- 10.30 Coffee
- 11.15 **Production of lithium carbonate from hard rock spodumene ore**
P. Tanskanen, P. Lamberg, P. Grönholm, O. Siren and M. Myllymäki (Keliber Ltd., Finland)
- 11.45 **Characterization and beneficiation of pyrolyzed black mass: Increasing the recycling rate of spent lithium ion battery**
A. Vanderbruggen and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)
- 12.15 **Evaluating organic acids as alternative leaching reagents for metal recovery from lithium ion batteries**
B. Musariri, G. Akdogan, C. Dorfling, S. Bradshaw, N. Snyders (University of Stellenbosch, South Africa), M. Lundström and P. Taskinen (Aalto University, Finland)
- 12.45 Lunch
- 14.00 *Technical Session 4*
Chairman: K.E. Waters (McGill University, Canada)
- 14.00 **A new discovery deserves a new approach - multi-technique geometallurgical characterization of the recently discovered Palokas Prospect cobalt (gold) mineralization, Northern Finland**
A.R. Butcher (Geological Survey of Finland, Finland), G. Rollinson (Camborne School of Mines, UK), P.W.S.K. Botha (Hippo Geoscience, Australia) and N. Cook (Mawson Resources, Canada)
- 14.30 **Hydrometallurgical processing of a complex sulfidic flue dust with focus on the separation of rhenium and molybdenum by solvent extraction**
T. Helbig and C. Scharf (Helmholtz Institute Freiberg for Resource Technology, Germany)
- 15.00 **Ion exchange recovery of rhenium from copper leach solutions using weakly basic anion exchange resins**
J.B. Hiskey (University of Arizona, USA)
- 15.30 **A surface chemistry study of niobium-bearing minerals**
V. Freire, C. Marion, R. Li, R. Langlois, M. Olivier, E. Houlding and K.E. Waters (McGill University, Canada)
- 16.00 Summary and invitation to Hi-Tech Metals '20
A.J. Wills (MEI, UK)
- 16.10 Farewell coffee and wine function, Vineyard Gardens
Accompanying Guests Welcome