

Precious Metals '12



Sunday 11th November

16.30-18.00 Pre-registration and wine reception
Accompanying guests welcome

Monday 12th November

- 08.00 Registration desk opens
Light breakfast of filled croissants, tea, coffee and fruit juice
- 09.00 Opening Remarks
J. Wills (MEI, UK) and M. Adams (Mutis Liber Pty Ltd, Australia)
- 09.15 *Technical Session 1*
Chairmen: J.P. Vaughan (Curtin University, Australia) and A. Amankwah (University of Witwatersrand, South Africa)
- 09.15 **Keynote Lecture: Metallurgical challenges facing the gold mining industry**
R. Dunne (Newmont Mining Corporation, USA)
- 09.55 **Development of a laboratory test to characterize the behaviour of free gold for use in a combined flash flotation and gravity concentrator model**
T.H. McGrath and W. Staunton (Parker Cooperative Research Centre for Integrated Hydrometallurgy Solutions, Curtin University, Australia)
- 10.15 **Demonstration of the CESL gold process**
T. Robinson, F. Lee, A. Heidel (CESL Limited, Teck, Canada)
- 10.35 Coffee
- 11.20 **A method to determine the optimum cycle time for batch centrifugal concentrators**
J. Eksteen and A. Bax (Curtin University of Technology, Australia)
- 11.40 **Process modelling of gold leaching-CIP for plant optimisation**
W.P. Staunton, G. Wardell-Johnson and A. Bax (Curtin University, Australia)
- 12.00 **The precious metals we prefer to ignore**
J.S.J. van Deventer (University of Melbourne, South Africa)
- 12.20 **Silver dynamics: an integrated system dynamics forecast model for silver**
M. Mrotzek, R. Baumgartner and T. Bruderemann (University of Graz, Austria)
- 12.40 Lunch
- 14.00 *Technical Session 2*
Chairman: L. Coetzee (Mintek, South Africa)
- 14.00 **Preg-robbing of silicates**
S. Mohammadnejad, J.L. Provis and J.S.J. van Deventer (University of Melbourne, Australia)

- 14.20 **Cyanide consumption analysis**
N.M Chapman, R.L Meakin, L.L Kuhar, D.J. Robinson and P. Breuer (CSIRO Minerals Down Under Flagship, Australia)
- 14.40 **Impact of recycling cyanide and its reaction products on upstream unit operations**
M. Adams (Mutis Liber Pty Ltd, Australia)
- 15.00 **A comprehensive study of poly-sulfide gold ores cyanidation: toward a better development of efficient strategies to increase gold leaching**
A. Azizi, C. Olsen, M. Ourriban and F. Larachi (COREM, Canada)
- 15.20 **The recovery of Au(I), Pt(II) and Pd(II) from low strength cyanide solutions, using ion exchange resins**
E. Schoeman, S.M. Bradshaw, G. Akdogan, C. Dorfling, C.A. Snyders (University of Stellenbosch, South Africa), M.D. Turner Jones and J.J. Eksteen (Lonmin, South Africa)
- 15.40 **Alternative methods of leaching to conventional cyanidation method in gold mining industry**
A. Sharafudinov, G. Demeuova, A. Tikhonov and G.K. Sugurbekova (Nazarbayev University, Kazakhstan)
- 16.00 **The role of arsenic in determining refractory behaviour in orogenic gold ores, Yilgarn Craton, Western Australia**
J.P. Vaughan, S.L. Chryssoulis and D. Venter (Curtin University Australia)
- 16.20 Coffee

Tuesday 13th November

- 08.15 Light breakfast of filled croissants, tea, coffee and fruit juice
- 09.00 *Technical Session 3*
Chairmen: J.S.J. van Deventer (University of Melbourne, Australia) and M. Adams (Mutis Liber Pty Ltd, Australia)
- 09.00 **Keynote Lecture: Processing of South African platinum ores- response to squeeze**
K. Liddell, Platmin Limited, South Africa
- 09.40 **Automatic size distribution estimation of platinum flotation froth using multistage adaptive thresholding and watershed**
A. Amankwah (University of Witwatersrand, South Africa) and C. Aldrich (Curtin University, Australia)
- 10.00 **A complementary milling and flotation advanced process control system at a platinum concentrator**
L. Coetzee, A. Naidoo and D. Phillipotts (Mintek, South Africa)
- 10.20 Coffee
- 11.00 **Modelling of an autoclave used for high pressure sulphuric acid/oxygen leaching of first stage leach residue**
C. Dorfling, G. Akdogan, S.M. Bradshaw (University of Stellenbosch, South Africa) and J.J. Eksteen (Curtin University, Australia)
- 11.20 **The separation of rhodium and iridium using diquaternary ammonium-functionalized beads and nanofibers**
A. Majavu, N. Torto and Z. Tshentu (Rhodes University, South Africa)

- 11.40 **Adsorption and separation of platinum and palladium using amine functionalized styrene-based beads and nanofibers**
O.E. Fayemi and Z. Tshentu (Rhodes University, South Africa)
- 12.00 **Elution of precious and platinum group metal cyanides from strong base anion exchange resins**
E. Schoeman, S.M. Bradshaw, G. Akdogan, C. Dorfling, C.A. Snyders (University of Stellenbosch, South Africa), M.D. Turner Jones and J.J. Eksteen (Lonmin, South Africa)
- 12.20 **Pyrometallurgical upgrading of PGM-rich leach residues from the Western Platinum base metals refinery through roasting, smelting and alloy atomisation**
G.A. Bezuidenhout (Lonmin, South Africa), J.J. Eksteen (Curtin University, Australia), G. Akdogan, S.M. Bradshaw (University of Stellenbosch, South Africa) and J.P.R. De Villiers (University of Pretoria, South Africa)
- 12.40 Conference summary and invitation to Precious Metals '14
M. Adams (Mutis Liber Pty Ltd, Australia) and A.J. Wills (MEI, UK)
- 13.00 Lunch