### Precious Metals '15

**Monday May 11th**

<table>
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<th>Time</th>
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| 09.00 | **Welcome to Cornwall**  
B.A. Wills (MEI, UK)                                                                 |
| 09.15 | **Technical Session 1**  
Chairmen: A. Cropp (ZEISS Natural Resources Lab, UK) and M. Tredoux (University of the Free State, South Africa) |
| 09.15 | **Keynote Lecture: Innovations in the processing of difficult and low grade gold ores**  
J.J. Eksteen (Curtin University, Australia)                      |
| 10.00 | **Alkaline sulfide gold leaching kinetics**  
C.G. Anderson (Colorado School of Mines, USA)                      |
| 10.30 | Coffee                                                                                     |
| 11.00 | **Coal-oil gold agglomeration assisted flotation to recover gold from refractory ore**  
A. Otsuki (Université de Lorraine, France) and Y. Chen (Curtin University, Australia) |
| 11.30 | **Twenty years of development to commercial demonstration of the Aachen Reactor™**  
S. Flatman, M. Battersby, R. Imhof (Maelgwyn Mineral Services Ltd, UK), J. Batty and P. Lotz (Maelgwyn Mineral Services, South Africa) |
| 11.30 | **Recovery of Ilesa gold concentrate by froth flotation using alkaline salts of vegetable oils**  
J.A. Ajayi (Federal University of Technology, Nigeria) |
| 12.00 | **The effect of temperature, contact time and agitation speed during pre-treatment on elution of gold**  
T.P. Oladele, C.A. Snyders, S.M. Bradshaw and G. Akdogan (University of Stellenbosch, South Africa) |
| 12.30 | Lunch                                                                                      |
| 13.00 |                                                                                           |
| 14.00 | **Technical Session 2**  
Chairman: J. Vaughan (University of Queensland, Australia) |
| 14.00 | **Dissolution of gold during pyrite oxidation reaction**  
M. Melashvili, C. Fleming, I. Dymov, D. Matthews (SGS Canada Inc., Canada) and D. Dreisinger (University of British Columbia, Canada) |
| 14.30 | **Gold extraction from a gold-copper concentrate in solutions containing caustic soda and low free cyanide**  
E.A. Oraby and J.J. Eksteen (Curtin University, Australia) |
| 15.00 | **The application of deep eutectic solvent ionic liquids for environmentally-friendly dissolution and recovery of precious metal ores**  
G.R.T. Jenkin, A.Z.M. Al-Bassam, R.C Harris, A.P. Abbott, D.J. Smith, D.A. Holwell (University of Leicester, UK) and C.J. Stanley (Natural History Museum, UK) |
| 15.30 | **Introduction of a new fully hydrometallurgical process for the recovery of precious metals from copper electrowinning anode slimes**  
S. Kurki, K. Lillkung and H. Virtanen (Outotec, Finland) |
| 16.00 | Coffee                                                                                     |
| 17.00 | Optional Guided Coast Path Walk, ending with a beer at the Chain Locker Pub, Old Falmouth. Accompanying partners welcome |
Tuesday May 12th

09.00 Technical Session 3
Chairmen: C.G. Anderson (Colorado School of Mines, USA) and D. Dreisinger (University of British Columbia, Canada)

09.00 Precious metals in gossanous waste rocks, Angostura copper mine, Iberian Pyrite Belt, Spain 173
J. Hunt, B.G. Lottermoser, A. Parbhakar-Fox (University of Tasmania, Australia) and E. Van Veen (Camborne School of Mines, UK)

09.30 Flowsheet development and comparison for the recovery of precious metals from low grade cyanide leach solutions 189
A.P. van Wyk, S.M. Bradshaw, G. Akdogan, C.A. Snyders (University of Stellenbosch, South Africa) and J.J. Eksteen (Curtin University, Australia)

10.00 The recovery of precious metals and platinum group metals from spent catalysts and other secondary sources using plasma smelting technology 204
T.P Johnson and D.E. Deegan (Tetronics International, UK)

10.30 Coffee

11.15 Light microscope to automated mineralogy correlation using ZEISS Mineralogic Mining: a case study using BMS and PGM analysis of samples from a PGE-bearing chromitite prospect within the Berit ophiolite, Turkey 212
S.D. Graham, A. Cropp (ZEISS Natural Resources Lab, UK and C. Brough (SRK Consulting, UK)

11.45 Capture of PGM using innovative functional polymers containing phosphine groups 223
Q. Ricoux, J.P. Méricq, D. Bouyer, C. Faur, (Institut Européen des Membranes, France), A. Musina (Magpie Polymers, France and University Politehnica of Bucharest, Romania), V. Bocokić and S.v. Zutphen (Magpie Polymers, France)

12.15 Froth flotation of a Merensky Reef platinum bearing ore using mixtures of SIBX with a dithiophosphate and a dithiocarbamate. 237
L. Kloppers, W. Maree, O. Oyekola and G. Hangone (Cape Peninsula University of Technology, South Africa)

12.45 Lunch

14.00 Technical Session 4
Chairman: T.P Johnson (Tetronics International, UK)

14.00 Dissolution of platinum in catalyst materials using hydrochloric acid – a new route via complex oxides 249
R. Kasuya, T. Miki, H. Morikawa and Y. Tai (National Institute of Advanced Industrial Science and Technology, Japan)

14.30 The state of platinum-group elements in ore forming systems: a report on recent evidence for nanoparticle involvement 259
M. Tredoux (University of the Free State, South Africa), C. Ballhaus and H. Helmy (Bonn University, Germany)

15.00 Nanofibers for separation of rhodium(III) and iridium(IV) chlorido species 270
A. Majavu, E. Hosten and Z.R. Tshentu (Nelson Mandela Metropolitan University, South Africa)

15.30 Application of direct electrowinning technology for the economic extraction of silver from a high grade polymetalic ore 311
A. Vathavooran (Tetra Tech WEI, UK) and T. Bergfeldt (Electrometals Technologies Ltd, Canada)

16.00 Closing remarks and invitation to Precious Metals ‘17
A.J. Wills (MEI, UK)

16.15 Cornish cream tea