Flotation '17

Provisional programme- subject to change
Changes will be highlighted and alerted at #Flotation17

Sunday November 12th

17.00-18.30 Registration and wine reception, with hot and cold canapés (accompanying persons welcome)

Monday November 13th

07.00 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

08.00 Fundamentals Symposium Opening Remarks
B.A. Wills (MEI, UK)

08.15 *Technical Session 1*
Chairmen: TBA

08.15 **Keynote Lecture: Developing a flotation model from first principles**
R.-H. Yoon (Virginia Tech, USA)

08.45 **Modelling of flotation processes by density functional hydrodynamics**
N. Evseev and O. Dinariev (Schlumberger Moscow Research, Russia)

09.05 **Predicting flotation behaviour – the interaction between stability and performance**
S.J. Neethling and P.R. Brito-Parada (Imperial College, UK)

09.25 **A novel method for the measurement of flotation recovery by means of 4D particle tracking velocimetry**
A.-E. Sommer, M. Nikpay (Helmholtz-Zentrum Dresden-Rossendorf, Germany), S. Heitkam and K. Eckert (Technical University Dresden, Germany)

09.45 **Water quality effects on bubble-particle attachment of sulphide minerals**
L. October, K. Corin, M. Manono, J. Wiese (University of Cape Town, South Africa) and N. Schreithofer (Aalto University, Finland)

10.05 Coffee, exhibition and poster viewing

10.50 **Nano-entities for surface modification of minerals. Implications for flotation**
B.I. Pålsson, T. Karlkvist and A.P. Mathew (Luleå University of Technology, Sweden)

11.10 **Kernel functions to flotation bubble size distributions**
Z. Javor (Université de Lorraine, France), N. Schreithofer and K. Heiskanen (Aalto University, Finland)

11.30 **Measurement of bubble size distribution in flotation froths**
E. Tshibwabwa, C. Bhondayi and M. Moys (University of the Witwatersrand, South Africa)

11.50 **Measurement of foam flow using Ultrasound Doppler Velocimetry**
S. Heitkam, R. Nauber, L. Büttner, J. Czarske (Technical University Dresden, Germany) and K. Eckert (Helmholtz-Zentrum Dresden-Rossendorf, Germany)

12.10 **The heat of immersion as an indicator of mineral surface wettability**
J. Taguta, B. McFadzean and C.T. O'Connor (University of Cape Town, South Africa)

12.30 **Flotation study of a fine grained carbonaceous sedimentary apatite ore – challenges in process mineralogy and impact of hydrodynamics**
D.H. Hoang (Hanoi University of Mining and Geology, Vietnam), H. Schubert (Technische Universität Bergakademie Freiberg, Germany), N. Kupka and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)

12.50 Lunch

14.00 *Technical Session 2*
Chairmen: TBA

14.00 **Flotation cell hydrodynamics and design modifications investigated with Positron Emission Particle Tracking**
P.R. Brito-Parada, K. Hadler, J.J. Cilliers (Imperial College, UK), A. Norori-McCormac (University College London, UK) and K. Cole (University of Cape Town, South Africa)

14.20 **Bubble size control in flotation column – numerical or imaging method**
L.O. Filippov (Université de Lorraine, France and National University of Science and Technology MISIS, Russia) and Z. Javor (Université de Lorraine, France)

14.40 **Study on gas dispersion characteristics in a column flotation using electrical resistance tomography coupled with pressure transducers**
B. Vadlakonda and N. Mangadoddy (Indian Institute of Technology, India)

15.00 **Tank design modifications for the improved performance of froth flotation equipment**
A.J. Morrison, P. Brito-Parada, and J. Cilliers (Imperial College, UK)

15.20 Coffee

16.00 **The importance of exposed mineral grain textures of particles on their flotation response**
C.F. Vos, C.L. Evans, E.M. Wightman (JKMRC, Australia), R. Kappes (Newmont Ltd, USA) and D.J. Bradshaw (University of Cape Town, South Africa)

16.20 **Effect of pyrite type on the electrochemistry of chalcopyrite/pyrite interactions**
E. Forbes, M. Vepsalainen and L. Smith (CSIRO Mineral Resources, Australia)

16.40 **Role of redox potential in flotation of galena**
M. Tadie (Stellenbosch University, South Africa), J.G. Wiese, K.C. Corin, C.T. O'Connor (University of Cape Town, South Africa)

17.00 **Characterizing mineral wettabilities on a microscale by colloidal probe atomic force microscopy**
B. Babel and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)

17.20 Happy Hour, Vineyard Gardens
Accompanying guests welcome

Tuesday November 14th

07.30 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

08.20 *Technical Session 3*
Chairmen: TBA

08.20 **Consideration of the pulp/froth interface in the compartment model of flotation**
R. LaDouceur, C. Young (Montana Tech, USA) and P. Amelunxen (Aminpro, Peru)

08.40 **The adsorption behaviour of surfactants on solid-liquid interfaces in saline water**
Z. Chang, X. Chen and Y. Peng (University of Queensland, Australia)

09.00 **Flotation collector: new understanding, new development**
Guangyi Liu, Jun Liu, Xianglin Yang and Hong Zhong (Central South University, China)

09.20 **Performance characterisation of new frothers for sulphide mineral flotation**
D. Chipfunhu (BASF Australia Ltd, Australia), G. Bournival, S. Ata (University of New South Wales, Australia) and S. Dickie (BASF New Zealand Ltd, New Zealand)

09.40 **Mitigation negative effects of thiosulfate on flotation performance of a Cu-Zn sulfide ore**
Y. Öztürk, Ö. Bıçak, E. Özdemir, A.Y. Yamantaş, M.O. Mercan and Z. Ekmekçi (Hacettepe University, Turkey)

10.00 Coffee

10.40 **A review of phosphoric acid esters for the flotation of oxidised copper minerals**
L. Mahlangu and F. Pinto (Clariant Southern Africa Pty Ltd, South Africa)

11.00 **Study on the effect of a mixture of hydrogen peroxide and ferrous sulfate on the floatability of chalcopyrite and molybdenite**
G.P.W. Suyantara, T. Hirajima, H. Miki and K. Sasaki (Kyushu University, Japan)

11.20 **The multiple flotation of quartz using environmental-friendly hexyl amine cellulose nanocrystals**
R. Hartmann and M. Illikainen (University of Oulu, Finland)

11.40 **Secondary collectors in direct flotation of apatite**
M. Svensson, H. Nordberg and N.S. Schwarzmayr (Akzo Nobel Surface Chemistry AB, Sweden)

12.00 **The promoting effect of cationic surfactant on low-rank coal flotation with oil collector: A molecular dynamics simulation study**
Yangchao Xia and Xiahui Gui (China University of Mining and Technology, China)

12.20 **Use of non-ionic surfactants as emulsifier in coal flotation: an experience from lab-scale to plant**
S. Jaiswal, Rashmi, A.K. Mukherjee and A. Bhatnagar (Tata Steel Ltd, India)

12.40 **Temperature-responsive polymers as tuneable collectors/depressants in flotation: a review**
W.S. Ng, L.A. Connal, G.V. Franks (University of Melbourne, Australia) and E. Forbes (CSIRO Mineral Resources, Australia)

13.00 Lunch

14.00 *Technical Session 4*
Chairmen: TBA

14.00 **Selective depression of pyrite using biopolymers in the flotation of copper sulphide minerals**
Y. Mu, Y. Peng (University of Queensland, Australia) and R.A. Lauten (Pionera, Norway)

14.20 **Effect of dispersants in flotation of molybdenite in the presence of kaolinite in seawater**
E. Rebolledo, A. Ramirez, L. Gutiérrez (University of Concepcion, Chile) and J.S. Laskowski (University of British Columbia, Canada)

14.40 **Effects of mono- and divalent cations in seawater flotation**
L. Pan and R.-H. Yoon (Virginia Tech, USA)

15.00 **Modelling effects of dissolved ions in process water on flotation performance**
O. Bicak, Y. Ozturk, E. Ozdemir and Z. Ekmekci (Hacettepe University, Turkey)

15.20 **On the mechanism of the flotation of soluble and semi-soluble salts**
F.K. Crundwell, B.D.H. Knights and N. du Preez (CM Solutions (Pty) Ltd, South Africa)

15.40 **Complete characterization of quartz flotation kinetics of a compact itabirite**
S.G.C. Nobre, T.F.M. Brasil Duque and C.L. Schneider (CETEM, Brazil)

16.00 **An investigation into copper upgrade using Reflux Flotation**
J.E. Dickinson and K.P. Galvin (University of Newcastle, Australia)

16.20 Coffee

17.45 Coaches leave for conference dinner at Lagoon Beach

Wednesday November 15th

07.00 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

07.55 Welcome to the Applications Symposium
J. Wills (MEI, UK)

08.00 *Technical Session 5*
Chairmen: TBA

08.00 **Keynote Lecture: Existing opportunities for increasing metallurgical and energy efficiencies in concentrators**
N.W. Johnson (Mineralis Consulting Pty Ltd and Adjunct Professor, University of Queensland, Australia)

08.30 **Forecasting flotation plant results – how precise is that?**
D.A. Bulled and C.A. Sosa-Blanco (SGS, Canada)

08.50 **How metal accounting can improve the efficiency of plant trials**
L. Lachance, S. Gariepy and M. Cousineau (Algosys, Canada)

09.10 **Development and application of a geometallurgical framework**
V. Ross (University of the Witwatersrand, South Africa)

09.30 **Characterization of the industrial flotation process based on size-liberation relationships**
P. Vallejos, J. Yianatos, L. Vinnett and L. Bergh (Federico Santa Maria Technical University, Chile)

09.50 **Modeling recoveries per size liberation classes using the particle surface area**
N.A. Santos (UFMG, Brazil)

10.10 Coffee, poster and exhibition viewing

10.50 **An innovative mineral surface conditioning technology to improve selectivity of flotation**
K.E. Kemppainen, M. Körkkö (Haarla Oy Oulu Laboratory, Finland), S. Jobin-Bevans (Haarla Americas, Chile) and J. Haarla (Haarla Americas, USA)

11.10 **Chemistry rules: the Prominent Hill experience**
C.J. Greet, M. Myllynen (Magotteaux Australia Pty Ltd, Australia) and T. Li (OZ Minerals, Australia)

11.30 **A study of the effect of grinding environment on the flotation of two copper sulphide ores**
J.Y. Liu, Han Long (Beijing General Research Institute of Mining and Metallurgy, China), K.C. Corin and C.T. O'Connor (University of Cape Town, South Africa)

11.50 **Downstream flotation changes that occur when hydrocyclones are replaced by multi-stack screens in a ball milling circuit**
J.J. Frausto, G.R. Ballantyne, K. Runge and M.S, Powell (Julius Kruttschnitt Mineral Research Centre, Australia)

12.10 **The effect of rotor speed on the flash flotation performance of Au and Cu in an industrial concentrator**
B. Newcombe (OptFroth Solutions Pty Ltd, Australia), B. Akerstrom and E. Jaques (Cadia Valley Operations, Australia)

12.30 **Evaluation of the FLSmidth nextSTEP™ installation at a South American concentrator**
B. Dabrowski, D. Lelinski, K. St. John, D. Stevens, M. Walker and A. Weber (FLSmidth, USA)

12.50 Lunch

14.00 *Technical Session 6*
Chairmen: TBA

14.00 **Metallurgical Performance of the 660 m³ SuperCell™ equipped with the nextSTEP™ rotor and stator**
B. Dabrowski, D. Lelinski, K. St. John, D. Stevens, M. Walker and A. Weber (FLSmidth, USA)

14.20 **Hydrodynamic and metallurgical performance of large TankCell® flotation cell in comparison to smaller cells**
T. Mattsson, R. Grau, A. Rinne (Outotec, Finland) and T. Maksimianen (Boliden Kevitsa Mine, Finland)

14.40 **Coarse chalcopyrite recovery in a universal flotation machine**
G.J. Jameson (University of Newcastle, Australia)

15.00 **Improving coarse particle flotation using Hydrofloat technology**
J.N. Kohmuench, M.J. Mankosa, H. Thanasekaran and A. Hobert (Eriez Flotation Div., USA)

15.20 Coffee

16.00 **Analysis of the impeller flow number in industrial Wemco mechanical flotation cells**
T.C Souza Pinto, A.S Braga, L.S Leal Filho (Instituto Tecnológico Vale/ITV, Brazil) and D.A. Deglon (University of Cape Town, South Africa)

16.20 **Getting the best out of your bubbles with good cleaner circuit design using the Jameson Cell**
V. Lawson (Glencore Technology, Australia)

16.40 **Improving the representation of hot flotation testing through the application of a novel, double batch flotation machine**
F.L Bernardis and J.M Wallenius (CP Kelco Oy, Finland)

17.00 **Improved flotation of fine PGMs with a high shear cavitation device**
K. Pillay, M. Dlame (Mintek, South Africa) and A. Singh (Gold Ore, South Africa)

17.20 **Improving fine flotation using the StackCell**
M.J. Mankosa, J.N. Kohmuench, L. Christodoulou and E.S. Yan (Eriez Flotation Div., USA)

17.40 **Research on pump performance of air forced and pulp induced flotation cell in gas-liquid system**
Z. Ming, S. Zhengcang, S. Shuaixing, H. Zhibin and H. Dengfeng (Beijing General Research Institute of Mining and Metallurgy, China)

18.00 Happy Hour, Vineyard Gardens
Accompanying guests welcome

Thursday November 16th

07.00 Registration desk opens. Light breakfast of filled croissants, tea, coffee and fruit juice

08.00 *Technical Session 7*
Chairmen: TBA

08.00 **Application of the hydrophobic hydrophilic separation (HHS) process for the recovery of fine particles**
B. Li, K. Huang, N. Gupta, G. Luttrell and R.-H. Yoon (Virginia Tech, USA)

08.20 **Effect of hydrophobic liquid and solid particles on behaviour of bubble bed in a downcomer**
S.H. Kuan, Y. Tan and J.A. Finch (McGill University, Canada)

08.40 **Grade analyser success factors: What is good enough for process control?**
B. Whitehead (Northam Platinum, South Africa), A. Russell (Mintek, South Africa) and K. Keet (Blue Cube Systems, South Africa)

09.00 **Implementation and optimisation of the SGS MET expert control system at MCM copper flotation plant**
R. Peacock, O. Bouh (First Quantum, Mauritania Copper Mine, Mauritania), M. Westcott and F. van der Walt (SGS Mineral Services, South Africa)

09.20 **Equipment health indicator to improve analyser availability**
J. Timperi, K. Aberkrom (Outotec, Finland), H. Miettunen and J. Larkomaa (Dragon Mining, Finland)

09.40 **Convolutional neural networks for feature extraction in froth flotation sensing**
Z.C. Horn, L. Auret, J.T. McCoy, B. Herbst (Stellenbosch University, South Africa) and C. Aldrich (Curtin University, Australia)

10.00 Coffee

10.40 **Improving grade control efficiency with rapid on-line elemental analysis**
I. Kejonen, O. Haavisto, J. Martikainen and V. Suontaka (Outotec Oy, Finland)

11.00 **Quantifying the benefit of supervisory control in froth flotation utilising froth characteristics for per cell performance metrics and balancing**
A Müller (Anglo American Platinum, South Africa), R.P Brown, A.L Haasbroek and S. Streicher (Stone Three Mining, South Africa)

11.20 **The use of automated sample transport and analytical methods to monitor and control flotation plant performance**
P. Hofmeyr, B. de Jong, B. Hohenstein and A. van der Westhuizen (Innovative Metallurgical Products (IMP), South Africa)

11.40 **Improving flotation recovery of oxide copper minerals**
T. Bhambhani, D.R. Nagaraj and O. Yavuzkan (Cytec Solvay Group, USA)

12.00 **Rapid beneficiation of ultrafine copper sulphide ore using a network of ultrathin emulsified oil films**
D.J. Borrow, K. van Netten and K.P. Galvin (University of Newcastle, Australia)

12.20 **Designing modified starches for depressing carbonaceous gangue during copper flotation**
B.L. Fletcher, M. Gidley, P. Halley, P. Luckman, Y. Peng and R. Truss (University of Queensland, Australia)

12.40 **Dynamic froth stability of copper flotation tailings**
I. Mackay, P.R. Brito-Parada, J.J. Cilliers (Imperial College, UK), E. Mendez, I. Molina and A.R. Videla (Pontificia Universidad Católica de Chile, Chile)

13.00 Lunch

14.00 *Technical Session 8*
Chairmen: TBA

14.00 **New reagent formulations for selective flotation of scheelite from a skarn ore with complex calcium minerals gangue**
I.V.Filippova, L.O. Filippov and Y.Foucaud (Université de Lorraine, France)

14.20 **Pyrite (FeS_2) depression in the flotation of lead and zinc at Rosh Pinah Mine, Namibia**
C. Magombedze, H. Musiyarira (Namibia University of Science and Technology, Namibia), H. Kalimbo and D. Van Zyl (Rosh Pinah Zinc Mine, Namibia)

14.40 **Pre-concentration of nickel in laterite ores using flotation**
S. Farrokhpay, D. Fornasiero and L. Filippov (Université de Lorraine, France)

15.00 **Development of fatty acid modifier for beneficiation of the igneous apatite ores of Kovdor deposit**
R. Kamkin, P. Alexandrov (OOO BASK, Russia), A. Michailovski (BASF SE, Germany) and P. Mikkola (BASF Oy, Finland)

15.20 Coffee

16.00 **Experimental design to optimize BASF's collector performance in the apatite froth flotation**
D.M. Neto, G. Budemberg and J. Davo (BASF SA, Brazil)

16.20 **Water quality impact on flotation: impacts and control of residual xanthates**
I. Muzinda (Boliden Kevitsa Mining Oy, Finland)

16.40 **Analysis of water quality variation in the tailings stream of a flotation cell operating at a coal preparation plant**
M. Yoshida, G. Bournival, N. Lambert and S. Ata (University of New South Wales, Australia)

17.00 Conference summary
J.A. Finch (McGill University, Canada)

17.15 Closing Remarks and Invitation to Flotation '19
A.J. Wills (MEI, UK)

17.20 Coffee and Farewell wine function, Vineyard Gardens
Accompanying guests welcome

Posters

Fundamentals Symposium

(Displayed 13th-14th November)

Selective flotation of scheelite from calcite using Pb-BHA complexes as collector and Al-Na_2SiO_3 polymer as depressant
Zhao Wei, Wei Sun, Haisheng Han, Yuehua Hu and Ruolin Wang (Central South University, China)

A laboratory-scale froth flotation tank for the design and optimisation of mechanical and operational improvements
A.J. Morrison, P. Brito-Parada, and J. Cilliers (Imperial College, UK)

The effect of surface coverage and particle size on the behaviour of rising bubbles
P. Wang, J.J. Cilliers, S.J. Neethling and P.R. Brito-Parada (Imperial College, UK)

Evaluation of an attachment-detachment kinetic model for the effect of energy input on the flotation rate constant
M. Safari, M. Harris and D. Deglon (University of Cape Town, South Africa)

Use of non-ionic surfactants as emulsifier in coal flotation: an experience from lab-scale to plant
S. Jaiswal, Rashmi, A.K. Mukherjee and A. Bhatnagar (Tata Steel Ltd, India)

The smaller the valuables, the poorer the recovery – Is that always true?
E. Schach, T. Leistner and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)

Fundamental aspects from Bayovar phosphate ore concentration
R.O. Baldoino (Vale Fertilizantes S.A, Brazil), E.R. Peçanha, M.B.M. Monte (CETEM, Brazil) and L.S.L. Filho (University of São Paulo, Brazil)

Investigation of the interaction mechanism of depressants in the reverse cationic flotation of complex iron ores
L.O. Filippov, I.V. Filippova (Université de Lorraine, France), C.H. Veloso de Melo and A. Correa de Araujo (ArcelorMittal Global R&D, France)

Intensification of the flotation process with electrochemistry potentiograms for copper ores
T.N. Alexandrova, K.M. Arustamyan, S.A. Romanenko, St.Petersburg Mining Institute, Russia) and A.M Arustamyan (AO "GiproRIVS", Russia)

Development of alternative additive of NaHS for selective flotation of chalcopyrite and molybdenite
T. Hirajima, H. Miki, Y. Muta, G.P.W. Suyantara and K. Sasaki (Kyushu University, Japan)

Froth liquid transport in a two-dimensional flotation cell
J. Yianatos, P. Vallejos C. Matamoros (Federico Santa Maria Technical University, Chile) and F. Díaz (Nuclear Trace and Engineering Ltd., Chile)

Use of a modified water glass in the flotation of molybdenite in seawater
F. Roman, A. Ramirez, L. Gutiérrez (University of Concepcion, Chile) and J.S. Laskowski (University of British Columbia, Canada)

The influence of the conditioning environment of oxidized pyrite and hematite on their hydrophobicity
T.F.M. Brasil Duque, M.B.M. Monte (CETEM, Brazil) and A.J.B. Dutra (Federal University of Rio de Janeiro, Brazil)

CFD modelling of column flotation hydrodynamics – validation against ERT data
B. Vadlakonda and N. Mangadoddy (Indian Institute of Technology, India)

Slime-coating of fine minerals on the lump coal surface using particle vision and measurement
Chao Ni, Xiangning Bu, Wencheng Xia, Yaoli Peng and Guangyuan Xie (China University of Mining and Technology, China)

The effect of change in process water chemistry on the behaviour of mixtures of thiol collectors during the flotation of a Pt bearing ore from the Merensky reef
K. Matibidi (Vaal University of Technology, South Africa), M.S. Manono, I.O. Otunniyi, K.C. Corin and J.G Wiese (University of Cape Town, South Africa)

The critical degree of surface oxidation in chalcopyrite flotation
T. Moimane, X. Chen, C. Plackowski and Y. Peng (University of Queensland, Australia)

Attachment of non-spherical particles to the fluidic surface: experiment and direct numerical simulations
G. Lecrivain (Helmholtz-Zentrum Dresden-Rossendorf, Germany and Kyoto University, Japan), K. Eckert, U. Hampel (Helmholtz-Zentrum Dresden-Rossendorf, Germany and Technische Universität Dresden, Germany), R. Yamamoto and T. Taniguchi (Kyoto University, Japan)

Design and construction of flotation collector with canola oil and non-ionic surfactants and create effective combination to reduce phosphorus from iron ore
M. Seyedmomen and B. Soltanzadeh (Islamic Azad University, Iran)

Role of ultrasonic treatment on the contacting behavior of bubble/oil-coated-bubble/oil-droplet on glass surfaces of various hydrophobicities
Yuran Chen, Wencheng Xia, Guangxi Ma, Yuqiang Mao (China University of Mining and Technology, China)

Flotation of copper sulphide tailings using hydroxypropyl-methyl cellulose as frother
T. Nuorivaara and R. Serna-Guerrero (Aalto University, Finland)

Bakery yeast (*saccharomyces cerevisiae*) as bioreagent in microflotation
D.V.C. Cara, A.C. Silva, E.M.S. Silva, G.S. Leal, L.M. Silva and A.M. Machado (Federal University of Goiás, Brazil)

Mechanism and performance of acidified water glass in scheelite flotation against calcite
N. Kupka, B. Babel and M. Rudolph (Helmholtz Institute Freiberg for Resource Technology, Germany)

The scale-up behaviour of the froth stability measurement
S. Geldenhuys and B. McFadzean (University of Cape Town, South Africa)

A frother for improved efficiency of flotation purpose
S. Srivastava (TAGE Solutions, India) and A. Ambasht (Jindal Steel Works, India)

Froth stability of steady state flotation at the bench scale
I. Mackay, J.J. Cilliers and P.R. Brito-Parada (Imperial College, UK)

Anisotropic surface reactivity of fluorite: a consideration of surface broken bonds
Zhiyong Gao, Ruiying Fan, Wei Sun and Yuehua Hu (Central South University, China)

Kinetics of froth flotation of naturally hydrophobic solids with different shapes
S. Szczerkowska (Wroclaw University of Science and Technology, Poland), A. Wiertel, J. Zawala (Polish Academy of Sciences, Poland), E. Larsen and P.B. Kowalczuk (Norwegian University of Science and Technology, Norway)

Prediction and experimental verification of a novel cationic surfactant: tributyltetradecyl-phosphonium chloride for iron ore flotation
Pan Chen, Chenyang Zhang, Yuehua Hu, Wei Sun, Jihua Zhai, Tong Yue (Central South University, China)and Dongbo Zhao (Nanjing University, China)

Insights into the activation mechanism of calcium ions on the sericite surface: a combined experimental and computational study
Yuehua Hu, Jianyong He, Chenhu Zhang, Chenyang Zhang, Wei Sun (Central South University, China), Dongbo Zhao, Pan Chen , Haisheng Han, Zhiyong Gao, Runqing Liu and Li Wang (Nanjing University, China)

Applications Symposium

Displayed 15th-16th November)

A novel scheme of tungsten minerals: flotation by Pb-BHA complexes for preconcentration and gravity separation for cleaning process
Haisheng Han, Yuehua Hu, Wei Sun, Runqing Liu, Tong Yue, Xiangsong Meng, Yanzhe Guo, Zhiyong Gao, Pan Chen (Central South University, China), Xiaodong Li, Chonggao Cao, , Weisheng Huang, Jie Liu, Jiawen Xie and Yulin Chen (Hu Nan Shizhuyuan Non-ferrous Metal Limited Liability Corporation, China)

Flotation of REE-minerals from fluorite by pH-shift
R.G. Merker (MMP, Germany), H. Morgenroth (UVR GmbH, Germany) and D.L. Smith (Commerce Resources Corp., Canada)

Cassiterite and sulfide flotation with a skarn type ore from Hammerlein Deposit, Germany
I. Bremerstein **(**UVR-FIA GmbH, Germany)

Deportment of trace elements in the flotation of copper ores
C. Plackowski and Y. Peng (University of Queensland, Australia

A critical review of effect of clays on froth flotation
S. Farrokhpay ((Université de Lorraine, France)

BASF selective metal collectors for enhanced sulphide flotation
A. Villanueva, A. Michailovski (BASF SE, Germany), P. Brito-Parada (Imperial College, UK) and E. Ozarslan (BASF Türk Kimya Sanayi ve Ticaret Ltd., Turkey)

The use of a factorial experimental design to optimize the flotation of fluorite ore
D. Tesh, H. Musiyarira and C. Magombedze (Namibia University of Technology, Namibia)

Beneficiation of siliceous carbonate phosphate ore
E. Ferreira, J.M. Silva, W. Silva, L. Gois, E. Fonseca, A. Avelar (Centro de Desenvolvimento Mineral/Vale, Brazil, M. Saito (Vale Fertilizantes S/A, Brazil) and L.A.F. Barros (Barros Consultoria e Engenharia Ltda. Brazil)

Minimizing the propagation of experimental errors in the estimate of flotation recovery of size-liberation classes using Savassi's method
N.A. Santos and R. Galery (UFMG, Brazil)

Evaluating flotation per size liberation classes
N.A. Santos and R. Galery (UFMG, Brazil)

Phenomenological models of entrainment and froth recovery for laboratory flotation kinetics tests
P. Amelunxen, R. Amelunxen (Aminpro, Peru), R. LaDouceur and C. Young (Montana Tech, USA)

The characterization of Polish copper ores using scanning electron microscopy techniques and image processing
K. Spunda, M. Kania and R. Kubik (Wroclaw Research Centre, Poland)

A novel scheme of tungsten minerals: flotation by Pb-BHA complexes for pre-enrichment and gravity separation for cleaning process
H. Han, Y. Hu, W. Sun, R. Liu, T. Yue, X. Meng, Y. Guo, Z. Gao, P. Chen (Central South University, China), W. Huang, J. Liu, J. Xie, Y. Chen and X. Li (Hu Nan Shizhuyuan Non-ferrous Metal Limited Liability Corporation, China)

Interactional effects of bubble size, particle size and collector dosage on bubble loading in column flotation
A. Eskanlou, M.R. Khalesi, M. Abdollahy (Tarbiat Modares University, Iran) and M.H. Chegeni (Arak University of Technology, Iran)

Investigation of Cu-Mo separation method in flotation process
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A. Bakalarz, M. Duchnowska and A. Luszczkiewicz (Wroclaw University of Technology, Poland)

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Effects of angled impeller on flotation cell performance
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A new flotation simulation framework for incorporating particle attributes
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L. Venkatesan (Anglo American, South Africa)

Design and synthesis of modified guanidine and polyamine collectors for reverse flotation of Indian iron ore slime
A.S. Patra, A. Dubey and A.K. Mukherjee (Tata Steel Limited, India)

Synergistic effects of surfactants and diesel in the flotation of coals with different degrees of surface oxidation
Z. Chang, X. Chen and Y. Peng (University of Queensland, Australia)

Improvement opportunities in flotation circuits of Indian coal beneficiation plants: A case study by TATA Steel
J. Singh, K. Mathanker, S.K Sit and D.P. Chakraborty (Tata Steel, India)

Selective flotation of fine-grained pentlandite
H. Kumar and S. Luukkanen (University of Oulu, Finland)

Innovation of froth velocity profile for rougher flotation optimization
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Comparison of self-aeration flotation machine vs induced air flotation machine with variation of SIBX dosage to optimize Cu and Au recovery North Concentrator PT X Papua
I. Ariyani, J. Wahyuadi and M. Soedarsono (Universitas Indonesia, Indonesia)

Flotation recovery of strategic metals from carbonaceous rocks
T.N. Alexandrova, N.V. Nikolaeva (Saint-Petersburg Mining University, Russia) and A.V. Aleksandrov (Russian Academy of Sciences, Russia)