

Programme BR2018

Sunday 6 of May 2018	
18:00	Reception + Registration
21:00	
Monday 7 of May 2018	
8:15	Registration
9:00	A Welcome Opening by the host
	Keynote Presentation
9:20	<p>Efthymios BALOMENOS</p> <p><i>Bauxite Residue Handling Practice and Valorisation research in Aluminium of Greece</i></p> <p>Mytilineos S.A. (Greece)</p>
Theme	From bauxite to a modified bauxite residue
10:00	<p>Michal KSIAZEK, Eli RINGDALEN, Per Helge HØGAAS , Casper van der EIJK</p> <p><i>Iron removal from bauxite ores</i></p> <p>SINTEF (Norway)</p>
10:20	<p>Sedat ARSLAN, Bekir CELIKEL, Meral BAYGUL, Gokhan Kursat DEMIR</p> <p><i>Implementation and optimization of filter press in red mud washing process at ETI Aluminyum</i></p> <p>ETI Aluminyum Inc. Seydisehir (Turkey)</p>
10:40	<p>Andrei GORONOVSKI¹, Johannes VIND^{2,3}, Vicky VASSILIADOU², Dimitrios PANIAS³, Alan H. TKACZYK¹</p> <p><i>Distribution of uranium, thorium and potassium in the Bayer process</i></p> <p>¹University of Tartu (Estonia), ²Aluminium of Greece (Greece), ³NTUA (Greece)</p>
11:00	<p>György BÁNVÖLGYI</p> <p><i>Production of bauxite residue with low soda and high iron content: the ILTD process option</i></p> <p>Senior Process Consultant, Alumina (Hungary)</p>

11:20	Coffee Break – Poster Session
Theme	Neutralisation, revegetation and beyond
11:40	<p>Gemma O’CONNOR, Ronan COURTNEY</p> <p><i>Performance of a constructed wetland treating alkaline bauxite residue leachate</i></p> <p>University of Limerick</p>
12:00	<p>Benoit CRISTOL¹, Ross GREENHALGH²</p> <p><i>QAL bauxite residue storage using sea water neutralisation</i></p> <p>¹Rusal (Australia), ²Queensland Alumina limited (Australia)</p>
12:20	<p>Elisa DI CARLO¹, Ronan COURTNEY¹, Amiel BOULLEMANT², Laurent POIZAT³</p> <p><i>Field sampling and ex-situ bioassays for assessing the ecotoxicological risk of trace elements in different rehabilitated bauxite residues</i></p> <p>¹University of Limerick (Ireland), ²Rio Tinto (France), ³Alteo-alumina (France)</p>
12:40	<p>Viktória FEIGL¹, Nelli BOMBOLYA¹, Ádám TÖRÖK¹, Zsófia BERKL¹, Viktória DÁVID¹, András KARI²</p> <p><i>Biotechnological applicability of micro-organisms isolated from bauxite residue</i></p> <p>¹ Budapest University of Technology and Economics (Hungary), ² Eötvös Loránd University (Hungary)</p>
13:00	Lunch
Theme	Integrated, near-zero waste processes
14:20	<p>Michail VAFEIAS¹, Danai MARINOS^{1*}, Dimitrios PANIAS¹, Efthymios BALOMENOS^{1,2}, Panagiotis DAVRIS¹, Michal KSIAZEK³, Casper V.D. EIJK³, Jafar SAFARIAN⁴, Leiv KOLBEINSEN⁴, Ingeborg SOLHEIM³</p> <p><i>From Red to Grey: revisiting the Pedersen process to achieve holistic bauxite ore utilization</i></p> <p>¹NTUA (Greece), ²Mytilineos S.A. (Greece), ³SINTEF (Norway), ⁴NTNU (Norway)</p>
14:40	<p>David KONLECHNER¹, Egon SEHNER², Ernst PICHLER³</p> <p><i>Concept for an industrial scale HCl based bauxite residuals valorization and idea for using available technology for piloting at batch scale</i></p> <p>¹KON Chemical Solutions (Austria), ²CMI UVK GmbH (Germany), ³Chemikalien & Technischer Service GmbH (Austria)</p>

15:00	<p>Tobias Hertel, Lukas ARNOUT, Silviana ONISEI, Bart BLANPAIN, Yiannis PONTIKES</p> <p><i>Developing the processes for bauxite residue binders</i></p> <p>KU Leuven (Belgium)</p>
15:20	Coffee break – Poster session
Theme	Novel Applications
15:40	<p>Jinhua BAO, Liang KONG, Zhen FAN, Heather S NIKOLIC, Kunlei LIU</p> <p><i>Utilising red mud as an oxygen carrier and catalyst for chemical looping gasification to produce hydrogen-rich syngas</i></p> <p>University of Kentucky (US)</p>
16:00	<p>Samira Fatma KURTOĞLU, Alper UZUN</p> <p><i>Tuning Structural Characteristics of red mud by acid modification for high performance in catalytic ammonia decomposition</i></p> <p>Koç University (Turkey)</p>
16:20	<p>Vesna ZALAR SERJUN¹, Ana MLADENOVIČ¹, Radmila MILAČIČ², Janez ŠČANČAR², Ana AŠLER³, Nina ZUPANČIČ³, Irena NIKOLIĆ⁴, Primož OPRČKAL¹</p> <p><i>Red mud as an alternative material for the production of a geotechnical composite</i></p> <p>¹ Slovenian National Building and Civil Engineering Institute (Slovenia), ²Jožef Stefan Institute (Slovenia), ³University of Ljubljana (Slovenia), ⁴University of Montenegro (Montenegro)</p>
16:40	<p>Michael JOHNSON</p> <p><i>Bauxite residue as a potential grid storage mechanism for renewable energy</i></p> <p>BigAtticHouse (USA)</p>
17:00	<p>Marcel SCHLAF</p> <p><i>Looking for acidity – or – the case of the missing chlorine: an option for a global closed loop alkalinity-acidity cycle for bauxite residue neutralization</i></p> <p>University of Guelph (Canada)</p>
17:20	Coffee Break – Poster Session
	Intensified poster presentation session
	<p>Sultan A. ALKHAMMALI, Abdulaziz N. AL-MUTAIRI, Abdulrahman M. ALOTAIBI, Majed A. ALMALKI, Yasir A. ALMUTAIRI</p>

	<p><i>Mineralogical and geochemical analyses of red mud in Saudi Arabia</i></p> <p>King Abdulaziz City for Science and Technology (Saudi Arabia)</p>
	<p>Raj Kishore PATEL, Manoj Kumar SAHU</p> <p><i>Neutralization of red mud using CO₂ sequestration</i></p> <p>National Institute of Technology (India)</p>
	<p>Zhongkai LIU</p> <p><i>Study on the Remediation Technology of Bauxite Residue</i></p> <p>Chalco (China)</p>
17:40	Closing of Monday's session
Tuesday 8 of May	
09:00	<p>Keynote Presentation</p> <p>Lisbeth RANDERS</p> <p><i>Kalundborg Symbiosis, moving towards a circular approach to production</i></p> <p>Kalundborg Symbiose (Denmark)</p>
Theme	Recovery of Fe, Al, Ti
9:40	<p>Marcelo SUSTER</p> <p><i>A very practical guideline for transforming waste in products- "bauxite residues applications business cases"</i></p> <p>Recaltech Thermal Plasma Technology (Brazil)</p>
10:00	<p>Jianmin ZENG, Jiacheng WANG, Zimeng TAN, Aoping HE</p> <p><i>Production of grey cast iron from red mud and laterite nickel ore</i></p> <p>Guanxi University (China)</p>
10:20	<p>Sk BISWAL¹, Bk SATPATHY², A AGNIHOTRI³, Dp CHAKRAVARTHY⁴</p> <p><i>Innovative Process for Extraction of Iron Values from East Coast Bauxite Residue with Gainful Application of Non-iron Material</i></p> <p>¹IMMT (India), ²IIT (India), ³JNARDDC (India), ⁴Eesavyasa Tech (India)</p>
10:40	<p>Gözde ALKAN, Bengi YAGMURLU, Yiqian MA, Buhle XAKALASHE, Srecko STOPIC, Carsten DITTRICH, Bernd FRIEDRICH.</p>

	<p><i>Combining pyrometallurgical conditioning and dry acid digestion of red mud for selective Sc extraction and TiO₂ enrichment in mineral phase</i></p> <p>RWTH Aachen University (Germany)</p>
11:00	Coffee Break – Poster Session
11:20	<p>Mansoor BARATI¹, Karim DANA EI¹, Yindong YANG¹, Ravi RAVINDRAN², Alexander MCLEAN¹</p> <p><i>Metal Refining Fluxes Based on bauxite Residue</i></p> <p>¹University of Toronto (Canada), ²Ryerson University (Canada)</p>
11:40	<p>Buhle XAKALASHE, Bernd FRIEDRICH</p> <p><i>Combined Carbothermic Reduction of Bauxite Residue and Basic Oxygen Furnace Slag for Enhanced Recovery of Fe and Slag Conditioning</i></p> <p>RWTH Aachen University (Germany)</p>
12:00	<p>Sumedh GOSTU¹, Brajendra MISHRA¹, Gerard MARTINS²</p> <p><i>Extraction of iron from red mud: low temperature reduction to magnetite and magnetic separation</i></p> <p>¹Department of Material Science and Engineering, Worcester Polytechnic Institute, ²Department of Metallurgy and Materials Engineering, Colorado School of Mines</p>
Intensified poster presentation session	
	<p>Gözde ALKAN, , Buhle XAKALASHE, Bengi YUGMURLU, Carsten DITTRICH, Srecko STOPIC, Bernd FRIEDRICH</p> <p><i>Enhancement of Sc and Ti extraction rates from Fe-depleted slag by hydrogen peroxide and sulfuric acid leaching</i></p> <p>RWTH Aachen (Germany), MEAB (Germany)</p>
	<p>Buhle XAKALASHE, Gözde ALKAN, Hugo Ignacio LUCAS, Bernd FRIEDRICH</p> <p><i>Conditioning of Bauxite Residue with Bottom Ash in view of recovery of valuable metals: A sustainable approach</i></p> <p>RWTH Aachen University (Germany)</p>
	<p>Chiara BONOMI, Ioanna GIANNOPOULOU, Johannes VIND, Dimitrios PANIAS</p> <p><i>1-ethyl-3-methylimidazolium hydrogen sulphate ionic liquid leaching of bauxite residue: iron, titanium and scandium recovery</i></p> <p>NTUA (Greece), MYTILINEOS S.A. (Greece)</p>

	<p>Pritii TAM¹, Chiara CARDENIA², Buhle XAKALASHE³, Vicky VASSILIADOU¹, Dimitrios PANIAS², Bernd FRIEDRICH³</p> <p><i>Conceptual flowsheets for Combined Recovery of Fe and Al from Bauxite Residue</i></p> <p>¹MYTILINEOS S.A. (Greece), ²NTUA (Greece), ³RWTH Aachen University (Germany)</p>
12:40	Lunch
Theme	Cement, concrete and inorganic polymers
14:20	<p>Marcelo MONTINI¹, José D. A. RODRIGUES², Rafael G. PILEGGI³, Karen SCRIVENER¹, Roberto Cesar ROMANO³, Xuerun LI¹</p> <p><i>Activate fly ash reaction using bauxite residue in blended cement</i></p> <p>¹EPFL (Switzerland), ²Federal University of São Carlos (Brazil), ³São Paulo University (Brazil)</p>
14:40	<p>David ARIÑO MONTOYA^{1,2}, Tobias HERTEL², Nikolaos PISTOFIDIS¹, Giannis GIANNAKOPOULOS¹, Remus Ion IACOBESCU², Marios KATSIOTIS¹, Yiannis PONTIKES²</p> <p><i>Bauxite residue as main raw material in the production of calcium sulfo-ferroaluminate clinker</i></p> <p>¹TITAN CEMENT (Greece), ²KU LEUVEN (Belgium)</p>
15:00	<p>Roberto Cesar ROMANO, Heitor M. BERNARDO, José A. MESQUITA, Gustavo H. MUNIZ, Maria Alba CINCOTTO, Rafael G. PILEGGI</p> <p><i>Evaluation of hardened state properties of zero-cement mortars produced using bauxite residue as an activator to ground blast furnace slag</i></p> <p>University of São Paulo (Brazil)</p>
15:20	<p>K. Sateesh BABU, N. Gangadhara REDDY, Partha Pratim DEY, B. Hanumantha RAO</p> <p><i>Susceptibility to compaction of lime and GGBS treated bauxite residue</i></p> <p>IIT Bhubaneswar (India)</p>
15:40	<p>Lukas ARNOUT¹, Tobias HERTEL¹, Lucas Beirao DO VALLE², Adrien NELIS², Marcel DORMANN², Theodoros KARACHALIOS¹, Yiannis PONTIKES¹</p> <p><i>Increasing the reactivity of bauxite residue for the use as building material: an alternative activation treatment</i></p> <p>¹KU Leuven (Belgium), ²CRM (Belgium)</p>

16:00	<p>Rui M. NOVAIS, João CARVALHEIRAS, Maria P. SEABRA, João A. LABRINCHA</p> <p><i>Innovative use for geopolymers containing high red mud content</i></p> <p>University of Aveiro (Portugal)</p>
16:20	<p>Coffee Break – Poster Session</p> <p>Intensified poster presentation session</p>
	<p>Andrei GORONOVSKI, Alan H. TKACZYK</p> <p><i>Assessment of NORM in bauxite residue to facilitate valorization</i></p> <p>University of Tartu (Estonia)</p>
	<p>Mariana K. KANASHIRO¹, Douglas H. MILANEZ¹, Everard C. M. NOYONS², Leandro I.L. de FARIA¹, José de Anchieta RODRIGUES¹</p> <p><i>Bauxite residue in cementitious materials – an analysis using citation and co-authorship maps</i></p> <p>¹Federal University of São Carlos (Brazil), ²Leiden University (The Netherlands)</p>
	<p>Tobias HERTEL¹, Chiara CARDENIA², Efthymios BALOMENOS^{2,3}, Dimitrios PANIAS², Yiannis PONTIKES¹</p> <p><i>Microwave treatment of bauxite residue for the production of inorganic polymers</i></p> <p>¹KU Leuven (Belgium), ²NTUA Athens (Greece), ³Mytilineos S.A.(Greece)</p>
	<p>M. Srinivasula REDDY¹, Dinakar PASLA¹, B. Hanumantha RAO¹, Bijtjoy SATPATHY¹, Subrat KAR², Binuta PATRA², Ananyaja KHUNTIA²</p> <p><i>A study on the compressive strength and mineralogical properties of fly ash and red mud based geopolymer mortar</i></p> <p>¹IIT Bhubaneswar (India), ²NALCO (India)</p>
	<p>Pithchai Pandian SIVAKUMAR, Tobias HERTEL, Yiannis PONTIKES</p> <p><i>Modified bauxite residue as an alternative supplementary cementitious material</i></p> <p>KU Leuven (Belgium)</p>
17:00	End of Tuesdays' sessions
18:00	Visit to Acropolis
20:00	Conference Dinner
Wednesday 9 of May 2018	

	<p>Keynote Presentation</p> <p>Krzysztof KUBACKI</p> <p>09:00 <i>EIT RawMaterials – world’s largest innovation network in metals and minerals</i></p> <p>EIT RawMaterials, Innovation Hub CLC East (Poland)</p>
Theme	Recovery of critical elements
	<p>Wenzhong ZHANG, Risto KOIVULA</p> <p>09:40 <i>Highly selective uptake of Sc³⁺ over Fe³⁺ by organic-inorganic hybrid titanium(IV) phosphate materials relevant to bauxite residue leachate conditions</i></p> <p>University of Helsinki (Helsinki)</p>
	<p>Panagiotis DAVRIS¹, Nikoleta GELESTATHI¹, Efthymios BALOMENOS², Dimitrios PANIAS¹ and Ioannis PASPALIARIS¹</p> <p>10:00 <i>Bauxite residue slag leaching for Al, Ti and Sc recovery</i></p> <p>¹NTUA (Greece), ² Mytilineos S.A (Greece)</p>
	<p>Éva UJACZKI^{1,2}, Patricia CUSACK^{2,5}, Rama Krishna CHINNAM^{1,5}, Seamus CLIFFORD^{3,5}, Teresa CURTIN^{4,5}, RONAN COURTNEY^{2,5}, LISA O’DONOGHUE^{1,5}</p> <p>10:20 <i>Evaluation of a reuse technology for bauxite residue – extraction of gallium</i></p> <p>¹University of Limerick (Ireland), ²Budapest University of Technology and Economics (Hungary)</p>
	<p>Maria OCHSENKUEHN-PETROPOULOU, Theopisti LYMPEROPOULOU, Lamprini-Areti TSAKANIKI, Klaus-Michael OCHSENKUEHN, Konstantinos HATZILYBERIS, Paraskevas GEORGIU, Chrysanthos STERGIOPOULOS and Fotios TSOPELAS</p> <p>10:40 <i>Mineral acid leaching of scandium from bauxite residue</i></p> <p>NTUA (Greece)</p>
11:00	Coffee Break – Poster Session
	<p>Dženita AVDIBEGOVIĆ, Mercedes REGADÍO, Rodolfo Marin RIVERA, Ghania OUNOUGHENE, Tom VAN GERVEN, Koen BINNEMANS</p> <p>11:30 <i>Purification of low concentration of rare earths from high concentration impurities in leach liquor of bauxite residue slag by a supported ionic liquid phase</i></p> <p>KU Leuven (Belgium)</p>

11:50	<p>Johannes VIND^{1,2}, Vicky VASSILIADOU¹, Dimitrios PANIAS²</p> <p><i>Rare earth elements and scandium mineralogy in bauxite residue</i></p> <p>¹Aluminium of Greece (Greece), ²NTUA (Greece)</p>
12:10	<p>John ANAWATI, Sable REID, Gisele AZIMI</p> <p><i>An innovative and sustainable valorisation process to recover rare earth elements from Canadian bauxite residue – synthetic oxalate precipitation study</i></p> <p>University of Toronto (Canada)</p>
12:30	<p>Edward PETERES¹, Şerif KAYA^{2,3}, Carsten DITTRICH², Kerstin FORSBERG¹</p> <p><i>Recovery of scandium by crystallisation techniques</i></p> <p>¹KTH Royal Institute of Technology (Sweden), ²MEAB (Germany), ³RWTH Aachen University (Germany)</p>
12:50	<p>Rodolfo Marin RIVERA¹, Buhle XAKALASHE², Ghania OUNOUGHENE¹, Koen BINNEMANS¹, Bernd FRIEDRICH², Tom VAN GERVEN¹</p> <p><i>Recovery of rare earths from bauxite residue slag by high-pressure acid leaching</i></p> <p>¹KU Leuven (Belgium), ²RWTH Aachen (Germany)</p>
13:10	Lunch
14:10	<p>Keynote Presentation</p> <p>Steven Philip ROSENBERG</p> <p><i>Bauxite Residue R&D, Emirates Global Aluminium, Technology Development and Transfer, Dubai, United Arab Emirates</i></p> <p>EGA (UAE)</p>
14:50	Intensified poster presentation session
	<p>Rodolfo Marin RIVERA, Ghania OUNOUGHENE, Koen BINNEMANS, Tom VAN GERVEN</p> <p>Recovery of selected rare earths from bauxite residue by dry digestion with multi-stage circulation of leach liquor</p> <p>KU Leuven</p>
	<p>Bengi YAGMURLU¹, Wenzhong ZHANG², Risto KOIVULA², Carsten DITTRICH¹, Bernd FRIEDRICH³</p>

	<p>Solid-state conversion of scandium phosphate to oxide by sodium hydroxide and sodium salts</p> <p>¹MEAB (Germany), ²University of Helsinki (Finland), ³RWTH Aachen (Germany)</p>
	<p>Panagiotis DAVRIS¹, Danai MARINOS¹, Efthymios BALOMENOS², Dimitrios PANIAS¹ and Ioannis PASPALIARIS¹</p> <p>Hydrometallurgical extraction of scandium from bauxite residue based on sulfuric acid process</p> <p>¹NTUA (Greece), ² Mytilineos S.A (Greece)</p>
	<p>Anna Lisa BACHMANN</p> <p>Fraunhofer Project Group Materials Recycling and Resource Strategies, IWKS Fraunhofer (Germany)</p>
	<p>Magdalena LUTY-BŁOCHO, Marek WOJNICKI</p> <p>The influence of the residence time of the REE ions in the microchannel on their enrichment efficiency</p> <p>AGH University (Poland)</p>
	<p>Marek WOJNICKI, Magdalena LUTY-BŁOCHO</p> <p>Extraction rate of Ho³⁺ ions from an aqueous solution to D2EHPA in cyclohexane</p> <p>AGH University (Poland)</p>
	<p>P. James JOYCE, Anna BJÖRKLUND</p> <p><i>Beyond landfill avoidance – assessment of the Sustainability benefits of proposed integrated bauxite residue valorisation flow sheets using life cycle assessment (LCA)</i></p> <p>KTH Royal Institute of Technology (Sweden)</p>
15:30	Award
16:50	Panel discussion
17:50	Closing session
18:00	Finale coffee session