

SYMPHOS 2017 Official Program

Sunday, May 7th 2017

4:00pm - 7:00pm Registration

Monday, May 8th 2017

8:00am - 10:00am Reception and Registration

10:00am - 10:30am OPENNING CEREMONY

10:30am - 11:15am **Plenary 1: Innovation for Sustainability**, Seeram Ramakrishna, Professor of Mechanical Engineering and Bioengineering, Center for Nano Fiber and Nano Technology, the National University of Singapore(NUS), Singapore
AFRICA AUDITORIUM

11:15am - 12:00pm EXHIBITION INAUGURATION

12:00pm - 1:15pm Lunch

1:15pm - 1:55pm **Plenary 2: Using Biotechnology to Make Phosphate Fertilizer More Sustainable**, Bruce E. Rittmann, Director, Biodesign Swette Center for Environmental Biotechnology, Regents' Professor of Environmental neering, Arizona State University, USA
AFRICA AUDITORIUM

| | SLURRY PIPE | AGRICULTURE | P-SUSTAINABILITY | WORKSHOP 1: INDUSTRIAL MAINTENANCE | WORKSHOP 2: SULFURIC ACID | | | P O S T E R S P R E S E N T A T I O N | E X H I B I T I O N V I S I T S |
|-----------------|--|---|---|--|--|--|--|---|--|
| | <i>GREEN CITY ROOM</i> | <i>AFRICA AUDITORIUM</i> | <i>GANTOUR ROOM</i> | <i>SAFI ROOM</i> | <i>JORF LASFAR ROOM</i> | | | | |
| 1:55pm - 2:20pm | CO1: Adaptation of the Jorf Lasfar phosphoric acid plants for using the slurry phosphate instead dry phosphate, <u>Salaheddine Fakhri El Abiari</u> , OCP S.A, Morocco | CO1: Fertilizer Use and Food Security Challenges in Morocco, <u>Lhoussaine Moughli</u> , Hassan II Agronomy and Veterinary Institute, Morocco | CO1: Circular Economy – Challenges and Opportunities for Phosphorus Recovery & Recycling from Wastes in Europe, <u>Christian Kabbe</u> , Berlin Centre of Competence for Water, Germany | WS1: How smarter can be maintenance and production control?, <u>Luca Colombo</u> , Trelleborg Fluid Handling Solutions, France | WS1: Debottlenecking of Sulphuric Acid Plants, <u>Abdelbaki Khamsine</u> , Outotec GmbH & Co.KG, Germany | | | | |
| 2:20pm - 2:45pm | CO2: How Slurry Properties Impact on Slurry Pipeline Transport, <u>Julian Rusconi</u> , Paterson & Cooke, South Africa | CO2: A comparative assessment of phosphorus use efficiency in the crop production system of different countries: a substance flow analysis perspective, <u>Xin Zhang</u> , University of Maryland, USA | CO2: Industry Initiatives Enhancing Phosphorus Sustainability, <u>Tom Bruulsema</u> , International Plant Nutrition Institute, Canada | WS3: From asset maintenance toward asset lifecycle management, <u>JBILL Abdenour</u> , OCP S.A & Jacobs Engineering S.A, Morocco | WS2: Improve your sulphuric acid plant energy efficiency by making Clean Water, <u>Rene Dijkstra</u> , Jacobs Engineering, USA | | | | |
| 2:45pm - 3:10pm | CO3: Intelligent Internal coatings for pipe spools in phosphate and other slurries, <u>Michael Magerstädt</u> , ROSEN IPS, Switzerland | CO3: Novel rapeseed germplasm and alternative oilseed crops to cope with climate change and enhance edible oil's food security in Morocco, <u>Abdelghani Nabloussi</u> , National Institut of Agronomic Research, INRA, Morocco | CO3: Mining, Processing and Using Phosphates in a Circular Economy, <u>Ludwig Hermann</u> , Outotec GmbH & Co KG, Germany | WS4: Key Factors in Implementing Successful Maintenance Improvement Projects, <u>Malcolm Werner</u> , Jacobs, Morocco | WS3: In-situ DSC as a Tool for New Cs Sulfuric Acid Catalyst Development, <u>Tom Brouwers</u> , MECS Europe/Africa, Belgium | | | | |
| 3:10pm - 3:30pm | Coffee break / Networking & Posters presentation | | | | | | | | |

Monday, May 8th 2017

| | MINING | AGRICULTURE | ENERGY | BIOTECHNOLOGY | WORKSHOP 1: INDUSTRIAL MAINTENANCE | WORKSHOP 2: SULFURIC ACID |
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| | GREEN CITY ROOM | AFRICA AUDITORIUM | GANTOUR ROOM | KHOURIBGA ROOM | SAFI ROOM | JORF LASFAR ROOM |
| 3:30pm - 3:50pm | CO1: Mine Digital Intelligence – From Data to Business Decisions, Javier Qrellena , Schneider Electric, Australia | CO4: Nutrient Management for Sustainable Agriculture Development: use of reactive Moroccan Rock Phosphate, Rudy Husnain , Indonesian Agency for Agricultural Research and Development, Indonesia | CO1: Progress and trends in the utilization of phosphate-based materials in energy and environmental fields, Ange NZIHOU , Toulouse University - International Mines Albi Graduate school of Engineering, France | CO1: Bioformulation of Microbial Fertilizer based on Clay and Alginate Encapsulation, Issam Meftah Kadmiri , MAScIR, Morocco | WS5: A Technical In-Depth Look at Predictive Maintenance and Other Related Inspection Methods, James Parker , AMERAPEX CORPORATION, USA | WS4: Fundamentals of reliable sulphuric acid plant design, Michael Fenton , Jacobs Engineering, USA |
| 3:50pm - 4:10pm | CO2: Automation and innovation in surface mining equipment driving efficiency, precision and production. Experience in hard rock, René Albert , Vermeer EMEA, Netherlands | CO5: Enhancing efficiency of traditional P fertilizers, Elena Bocharnikova , Institute of Physical-Chemical and Biological Problems in Soil Sciences RAS, Russia | CO2: Solar sludge drying demonstration plant, Lars Amsbeck , DLR Institute of Solar Research, Germany | CO2: Legume-rhizobia Symbiosis Enhances Phosphorus Fertilizers Use Efficiency in Soil Under Field Conditions, Cherki Ghoulam , Faculty of Sciences and Techniques Marrakesh, Morocco | WS6: How could you manage critical assets from anywhere? Wake up your sensors with the Wi-Care, Pierre Colon , I-Care sprl, France | WS5: Innovation In Sulphur Handling, Raiz Bashheeruddin , Furnace Fabrica Ltd., India |
| 4:10pm - 4:30pm | CO3: Rock Hawg, innovative way to Surface Mining, Flavio Villa , Tesmec S.p.A., Italy | CO6: Soil fertility mapping and fertilizer recommendation in cocoa belt of Côte d'Ivoire, Koffi Emmanuel Kassin , CNRA Cacao program, Ivory Coast | CO3: New conceptual design of an energy storage and recovery unit, Chakib Bouallou , MINES ParisTech PSL Research University, France | CO3: Microalgae as biostimulant of plant tolerance to salt stress, Hicham EL Arroussi , MAScIR, Morocco | Discussion | WS6: Emissions Reduction in Sulphuric Acid Plants, Jan Albrecht , Outotec GmbH & Co.KG, Germany |
| 4:30pm - 4:50pm | CO4: Why Automate a BlastHole Drilling rig for your mining operation?, Andrew Voll , AtlasCopco, USA | CO7: Contributing to solutions for malnutrition through fertilizers, Samuel Gameda , International Maize and Wheat Improvement Center (CIMMYT), Ethiopia | CO4: Thermal energy storage using lithium, sodium and potassium polyphosphates, Doan Pham Minh , Toulouse University - International Mines Albi Graduate school of Engineering, France | CO4: Mycorrhizal and Trichoderma harzanium Inoculation Enhance Bean Growth and Protection against Phaeoisariopsis griseola in Southern Cameroonian Soil, Martin Jemo , OCP S.A, Morocco | | Discussion |
| 4:50pm - 5:10pm | CO5: Sustainability of Phosphate and Potash Reserves in Jordan, Khalid Al-Tarawneh , Al Hussein Bin talal University, Jordan | | | | | |

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Tuesday, May 9th 2017

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| 9:30am - 10:10am | Plenary 3: High Energy & high power electrodes for automotive battery applications, Khalil Amine, Argonne National Laboratory, USA <i>AFRICA AUDITORIUM</i> |
| 10:10am - 10:50am | Plenary 4: Exploiting the potential role of fertilizers in increasing food production in developing countries amidst worsening food insecurity and climate change, Prof. Tekalign Mamo, Director, Center for Soil and Fertilizer Research in Africa, Mohammed VI Polytechnic University of Benguerir, Morocco <i>AFRICA AUDITORIUM</i> |
| 10:50am - 11:20am | Coffee break / Posters presentation |

| | PHOSPHORIC ACID | BENEFICIATION | VALUABLE TRACE ELEMENTS | MATERIAL/ CORROSION | INDUSTRIAL TECHNOLOGY | Novelty Show "DIGITAL MINE" Workshop By VIST GROUP and BELAZ | POSTERS PRESENTATION VISITS EXHIBITION |
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| | <i>AFRICA AUDITORIUM</i> | <i>GREEN CITY ROOM</i> | <i>SAFI ROOM</i> | <i>GANTOUR ROOM</i> | <i>JORF LASFAR ROOM</i> | <i>BOUCRAA ROOM</i> | |
| 11:20am - 11:45am | CO1: Phosphate Slurry Neutralization Experience Under Different Conditions, Haseeb Hayat , Fatima Fertilizer Company Limited, Pakistan | CO1: The Importance of Phosphate Process Optimization from Mine to Market, Todd Parker , ArrMaz, USA | CO1: Recovery of Administratrum from Phosphates, Vaughn Astley , Dr. Phosphate Inc., USA | CO1: The use of phosphate pigments in anti-corrosion coatings, Mark Powell , Colorado L.C., Morocco | CO1: Eco-friendly bulk handling equipment in the fertilizer industry, Pietro de Michieli , Bedeschi Spa, Italy | Welcoming speech: 1) Dmitry Vladimirov - General Director of VIST Group company. 2) BELAZ representative | POSTERS PRESENTATION VISITS EXHIBITION |
| 11:45am - 12:10pm | CO2: Role of additives in improving extraction efficiency of Phosphoric acid manufacture, G M Patel , CIFC P Ltd, India | CO2: Improved selective flotation reagents for phosphate ore upgrade, Alexej Michailovski , BASF SE, Germany | CO2: A comparison between REE extraction from phosphate rock before and after phosphoric acid production, Althyabat Salah , Al-Hussein Bin Talal University, Jordan | CO2: Critical Equipment Monitoring & Protection System, Benna Amine Ghali , SKF France, Morocco | CO2: Hydrocycloning technology in phosphate beneficiation with polyurethane based material, "TWIN-type" and "FLAT-bottom" geometries, Baumann Thomas , AKW Apparate & Verfahren GmbH, Germany | NS2: VG Karier Implementation on OCP S.A. Merah mine. Case Study. OCP representative. | |
| 12:10pm - 12:35pm | CO3: DH Phosphoric Acid Plants Revamp Options, Peter Stockhoff , Thyssenkrupp Industrial Solutions AG, Germany | CO3: Increasing Flotation Efficiency in Reverse Flotation – Exploring the Benefits of a New Flotation Reagent, Paul Wiatr , Nalco Water, USA | CO3: The Algerian Glauconite-bearing Phosphorites: REE Variation and Insights on the Depositional Environment, Rabah Kechiched , Ouargla University, Algeria | CO3: The Use of FRP (Fiberglass-reinforced Plastic) in Phosphate Fertilizer and Sulfuric Acid Processes, Olivia Woerth , Ashland Technologies, Germany | CO3: Energy Efficiency of Pumping Systems in the Fertilizer Industry through Optimized Pump Selection, Merja Pärssinen , Sulzer Pumps, Finland | NS3: BELAZ presentation. New trends of digital mining vehicles - smart on-board solutions. | |
| 12:35pm - 1:50pm | Lunch | | | | | | |
| 1:50pm - 2:30pm | Plenary 5: Replacement and Maintenance Strategy, Pascal Du Bois D'enghien, Project Manager MECS Europe/Africa BVBA , Belgium <i>AFRICA AUDITORIUM</i> | | | | | | |

| | PHOSPHORIC ACID | BENEFICIATION | VALUABLE TRACE ELEMENTS | INDUSTRIAL MAINTENANCE | INDUSTRIAL TECHNOLOGY | NEW PHOSPHATED MATERIALS | Novelty Show "DIGITAL MINE" Workshop By VIST GROUP and BELAZ |
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| | AFRICA AUDITORIUM | GREEN CITY ROOM | SAFI ROOM | GANTOUR ROOM | JORF LASFAR ROOM | KHOURIBGA ROOM | BOUCRAA ROOM |
| 2:30pm - 2:50pm | CO4: Hemi versus Dihydrate, Why Hemi Is Often the Better Choice for Phos Acid, John Wing , Phosacid, USA | CO4: Major environmental projects launched in OCP's mining sites, AJIM Nouredine , OCP Group, Morocco | CO4 : Rare Earths Recovery and Separation from Wet Process Phosphoric Acid, Tom Baroody , K-Technologies, Inc. USA | CO1: Two case studies of simulation-based engineering: Compass Minerals SOP Project and Optimizing Process and Control of a Tilting Pan Filter, Montserrat Amezcua , ANDRITZ Separation Inc., USA | CO4: Screening Technologies in Phosphate Production, Günter Schrön , RHEWUM GmbH, Germany | CO1: Antibacterial biomimetic apatite-based bone cements, Christele Combes , University of Toulouse, France | NS4: Autonomous and tele-operated mining vehicles. New possibilities of efficiency and safety in mining. |
| 2:50pm - 3:10pm | CO5: Research and development of cleaner wet process for phosphoric acid production without waste gas discharge, Jiahua ZHU , Sichuan University, China | CO5: The mechanism of apatite/carbonates separation in acidic flotation process of calceours phosphate ores, Lev O. Filippov , University of Lorraine, France | CO5: Economical comparison of Hydrofluoric Acid Production from Fluorosilicic acid and Fluorspar, Olivier Ruffiner , Buss ChemTech AG, Switzerland | CO2 : Case Studies of Major Mining and Petrochemical Incidents involving Industrial Maintenance: Use of TRIPOD Beta Methodology in Understanding the Causes, M'hamed Chergaoui , Vivo Energy Maroc, Morocco | CO5 : Phosphorite beneficiation using a STEINERT mobile XRT sorter, Kai Bartram , Steinert Elektromagnetbau GmbH, Germany | CO2: Electrode materials based on phosphates for low cost sodium ion batteries, Ismael Saadoun , UM6P, Morocco | NS5: BELAZ presentation. New models of trucks, case studies of efficient usage of dump trucks in phosphate, gold, coal mining companies. Robotized trucks |
| 3:10pm - 3:30pm | CO6: Green acid purification with a solvent extraction process, Hannu Laitala , Outotec Oy, Finland | CO6: Basic recommendations for the sustainable use of primary and secondary sources of phosphorus in Poland , Marzena Smol , Polish Academy of Sciences, Poland | CO6: Fluorine Recovery and Utilization from a Phosphoric Acid Plant, Curtis Griffin , PegasusTSI, USA | CO3: Factors impacting successful implementation of Lean production in process industry: An investigation of Moroccan phosphates industry, Amine Belhadi , OCP S.A, Morocco | CO6: MAX3™ - Maximized Value for Capex, Opex and Emission, Matthew VIERGUTZ , Dupont Solutions SAS, France | CO3: Phosphorus-containing materials for heat storage, Abdoul Razac Sane , Toulouse University - International Mines Albi Graduate school of Engineering, France | NS6: Industrial health and safety management system – case study of risk management in mining |
| 3:30 - 3:50pm | CO7: A Phosphoric Acid Process Simulator for Knowledge Transfer, Sergio Joao , SNC-Lavalin, Canada Alexandre Durand , Prayon, Belgium | CO7: Processing Phosphate Rock from North Africa with ArrMaz Carbonate Collectors, Guoxin Wang , ArrMaz, USA | CO7: A new process for producing a high grade synthetic calcium fluoride from fluosilicic Acid, Kamal Samrane , OCP S.A, Morocco | CO4: Outotec HEROS™ Update - journey through operational experience, Michael Kemmerich , Outotec GmbH & Co.KG, Germany | CO7: Dry Sulphur Material Handling Systems, Sulphur Prilling, and New Melter Technology, Mark L Gilbreath , Matriix PDM Engineering, USA | CO4: Apatite Calcium Phosphates for Medical Applications: The Example of Drug Delivery Systems, Allal Barroug , Cadi Ayyad University, Morocco | NS7: Predictive maintenance and predictive production - new "blue ocean" in efficiency. Case study of processing plant. |
| 3:50pm - 4:10pm | CO8: Phosphoric Acid Purification Technology, Viviana Diaz , KBR Ecoplanning Oy, Finland | CO8: Latest Developments and Experiences on the Beneficiation of Rock Phosphates using X-Ray Sorting Machines, Jens-Michael Bergmann , TOMRA Sorting GmbH, Germany | CO8: Ammonium sulfate production from by-products of the wet phosphoric acid process - fluosilicic acid and phosphogypsum, Maksim Tcikin , The research Institute for Fertilizers and Insectofungicides, Russia | CO5: A Reliable Condition Monitoring Approach Related to a Steam Turbine Major Overhaul, Omar Kenfaoui , Prüftechnik, France | CO8: Re-introducing solid bowl decanter centrifuges for dewatering in the mining industry, Bent Madsen , Alfa Laval Copenhagen A/S, Denmark | | NS8: Optimizing drilling and blasting using high precision guidance, fragmentation analysis and predictions. |
| 4:10pm - 4:30pm | CO9: Sizing factors for phosphoric acid plant design, Paul Anthony Smith , P Smith & Associates, Brazil | CO9: Development and testing of the nextSTEP(Tm) technology, an energy-efficient flotation rotor designed from a fundamental approach, Liam Mac Namara , FLSmidth Minerals, USA | CO9: Improvement of the Fluorine Recovery Process in a Phosphoric Acid Concentration Unit, Hadrien Leruth , Prayon, Belgium | CO6: Optimized Spare Parts Management – An Investment in Asset Availability & Reliability, André Wötzel , Thyssenkrupp Industrial Solutions AG, Germany | CO9: Optical sieve analysis for Online quality control and real time monitoring of the granulation process, Robert Waggeling , Microtrac GmbH, Germany | | NS9: Driver assistance systems for reliable statistics and safety. |
| 4:30pm - 4:55pm | Coffee break / Posters present | | | | | | |

EXHIBITION VISITS
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Wednesday, May 10th 2017

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| 9:30am - 10:10am | Plenary 6: REACH legislation and how it affects fertilizer products innovation , <u>Gilles BARRETO</u> , Responsible Research and Development Tensioactifs, Research Center Rhône-Alpes ARKEMA (CRRA), France <i>AFRICA AUDITORIUM</i> | | | | | | | | | |
| 10:10am - 10:50am | Plenary 7: Leveraging the combined powers of science and entrepreneurship in African Agriculture transformation , <u>Débjisi Àràbà</u> , Director, Africa Region, International Center for Tropical Agriculture (CIAT), Kenya <i>AFRICA AUDITORIUM</i> | | | | | | | | | |
| 10:50am - 11:20am | Coffee break / Posters presentation | | | | | | | | | |
| | FERTILIZERS / FEEDS <i>AFRICA AUDITORIUM</i> | BY PRODUCTS <i>GREEN CITY ROOM</i> | INDUSTRIAL TECHNOLOGY <i>SAFI ROOM</i> | WATER <i>GANTOUR ROOM</i> | WORKSHOP 3: CADMIUM <i>JORF LASFAR ROOM</i> | | | | | |
| 11:20am - 11:45am | CO1: The Production of NPK Fertilizers , <u>David Ivell</u> , Jacobs Engineering, USA | CO1: The Occurrence of Serendipity During 50 Years of Phosphate Research....Crystals Galore!! , <u>Vaughn Astley</u> , Dr. Phosphate Inc., USA | CO1: New Developments and Experience with Multi-Stage High Pressure Pumping Using Centrifugal Slurry Pumps , <u>Kenny Don</u> , FLSmidth Krebs, USA | CO1: The water footprint - the optimization of the resource , <u>Emmanuel LENAIN</u> , SUEZ International, France | WS1: Decadmiation: A 'healthy' challenge for the phosphate industry , <u>Rajesh Raitani</u> , Solvay Group, USA | | | | | |
| 11:45am - 12:10pm | CO2: Feed grade Calcium Phosphates , <u>Vasil Statev</u> , B.C.Consult LTD, Bulgaria | CO2: Phosphorus Recovery from Sewage Sludge Ash by a Wet-chemical Process , <u>Carsten Dittrich</u> , MEAB Chemie Technik GmbH, Germany | CO2: Recent Developments in FLSmidth Dewatering Technology , <u>Todd Wisdom</u> , FLSmidth Salt Lake City, USA | CO2: From Seawater to Drinking Water: How CAP Holdings' NexGenDesal™ System Makes It Happen , <u>Gregory Pasiuk</u> , CAP Holdings Co. LLC, USA | WS2: Cadmium Removal from Phosphate Rock , <u>Tanja Schaaf</u> , Outotec GmbH & Co. KG, Germany | | | | | |
| 12:10pm - 12:35pm | CO3: Impact of Process Entrance on the MDCP Quality , <u>Hassna El Idrissi</u> , OCP S.A, Morocco | CO3: Characterization and valorization of Tunisian phosphogypsum in pressed unfired bricks and autoclaved bricks , <u>Wissem Gallala</u> , University of Sousse, Tunisia | CO3: Phosflow® Technology for Effective Heat Exchanger Scale Inhibition in Phosphoric Acid Plants Utilizing North African Phosphate Rock , <u>Ravi Rajshekar Hiremath</u> , Solvay, USA | CO3: Groundwater Salinity Mapping of Fom El Oued – Laayoune Agricultural Perimeter and Proposed Management , <u>Shabbir A Shahid</u> , International Center for Biosaline Agriculture, United Arab Emirates | WS3: Technology for deactivation of Cd and other heavy metals in phosphate rock , <u>Vladimir Matichenkov</u> , Institute of Basic Biological Problems RAS, Russia | | | | | |
| 12:35pm - 1:50pm | Lunch | | | | | | | | | |

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Wednesday, May 10th 2017

| | FERTILIZERS | BY PRODUCTS | INDUSTRIAL TECHNOLOGY | SOILS MANAGEMENT | WORKSHOP 4: INDUSTRIAL MANAGEMENT |
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| | AFRICA AUDITORIUM | GREEN CITY ROOM | SAFI ROOM | GANTOUR ROOM | JORF LASFAR ROOM |
| 1:50pm - 2:15pm | CO4: Optimization of Fertilizer Bulk Blending Equipment in Africa, Karim Ibadulla , PegasusTSI, USA | CO4: New Approach And Case Study to Mitigate Environmental Impacts From Phosphogypsum Stacking, Vincent Dardenne , AQUALE SARL, Belgium | CO4: SmartCyclone delivers new opportunities for process optimization, Josh Klein , FLSmidth Krebs, USA | CO1: Practicing Compost and Biofertilizer to Enhance Phosphorus and Nitrogen Availability to Quinoa Crop Productivity and Improving Health of Sandy Soil, Shagufta Gill , International Center for Biosaline Agriculture, United Arab Emirates | WS1: From mineral characterization to plant implementation: an integrated methodology to promote success in the mining industry, Simon B. Blancher , ERAMET Research, France |
| 2:15pm - 2:40pm | CO5: Novel Technologies to Convert Low-Grade Phosphate Rock into Slow Release Fertilizers, Zhenli He , University of Florida-IFAS, USA | CO5: Pilot Tests for the Use of Afitex Geocomposites in Sludge Basins of MEA Processing Units, Abdesselam Tair , Afitex, France | CO5: Next generation polymer dewatering of clay dominant tailings systems, Lewis Utting , BASF Australia Ltd, Australia | CO2: Forage Production System on Salt-Affected Farms in Foug El Oued – Laayoune, Redouane Choukr-Allah , International Center for Biosaline Agriculture, United Arab Emirates | WS2: Simplified SO2 emissions control with side benefits, Devin Shaw , Shell Cansolv, Canada |
| 2:40pm - 3:05pm | CO6: Application of units, combining the granulation and drying, for development of flexible processes of phosphorous-containing fertilizers production, Andrei Norov , The Research Institute for Fertilizers and Insectofungicides, Russia | CO6: Dewatering of Phosphatic slimes by carbonate based particles, Mehmet Sabri Celik , Istanbul Technical University, Turkey | CO6: Improving Gas Cleaning Equipment Operations Through Reduction of Blockage by Solids, Graeme Cousland , Begg Cousland Envirotec Ltd., United Kingdom | CO3: Innovation and technology for soil fertility assessment and fertilizer recommendation, Babasola AJIBOYE , OCP Africa, Morocco | WS3: Moving to The 20th Century!!! APC, Vaughn Astley , Dr. Phosphate, Inc., USA |
| 3:05pm - 3:30pm | CO7: Casale integrated Technologies and Services for New Fertilizer Plants, James Montanaro , Casale SA, Switzerland | | CO7: "Barracuda® - a Revolutionary New Mining Concept", Bergbau Ullrich Mentges , Thyssenkrupp Industrial Solutions AG, Germany | CO4: Recent developments in sustainable P management strategies/technologies in the crop production system: A systematic review, Rubel Biswas Chowdhury , University of Maryland, USA | WS4: Application of Modern Seam Modelling, Margin Ranking and Open Pit Design Techniques in Phosphate Mining, Sabine Anderson , SRK Consulting Limited, United Kingdom |
| 3:30pm - 3:55pm | CO8: Electron microscopy analysis as a tool to improve granular fertilizers, J. A. González-León , Research Center Rhône-Alpes ARKEMA (CRRA), France | | | | WSS: Advanced Conveyor Supervision: Case Study, Yassine Elyassami , OCP S.A, Morocco |

POSTERS
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3:55pm - 4:25pm CLOSING CEREMONY

Posters List

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| Poster 1 | Towards revegetation of the cover made with phosphate mine wastes in order to control the AMD generated at Kettara pyrrhotine closed mine, <u>Hamza Zine</u> , Faculty of Sciences Semlalia Marrakech, Morocco | Poster 28 | Etude de la décomposition des phosphogypses en présence des schistes bitumineux marocains, <u>Mohamed Ait Darham</u> , Cadi Ayyad University, Marrakech, Morocco |
| Poster 2 | Tailored blending definition as a source of flexibility in controlling mine production, <u>Ahlam Azzamourj</u> , Mohammed VI Polytechnic University, Benguerir, Morocco | Poster 29 | The use of modern characterization techniques for cadmium speciation in phosphate ores, <u>Abdessamad Khalil</u> , National Graduate Engineering School - Mines Rabat, Rabat, Morocco |
| Poster 3 | Application of geophysics for the detection of derangements of phosphate layers in Oulad Abdoun basin, <u>Essaid Zerouali</u> , OCP Group, Morocco | Poster 30 | Modeling and optimization of the extraction of cadmium from industrial phosphoric acid, <u>Kaoutar Berkalou</u> , High School of technology, Morocco |
| Poster 4 | Geological and geo-electrical characterization of the aquifer system of the transition zone between the phosphate plateau and the Tadla plain, <u>Fadwa Radouani</u> , OCP Group, Morocco | Poster 31 | Recovery and characterization of REE-bearing phosphates, <u>Edahbi Mohamed</u> , University of Quebec in Abitibi, Canada |
| Poster 5 | Phosphate flotation cells study and simulation using the CFD approach, <u>Asmaa Hadane</u> , Mohammed 6th Polytechnic University, Benguerir, Morocco | Poster 32 | Assesment of the transfer of metals trace elements to spontaneous plants: potential application for phytostabilization of phosphate limestone wastes, <u>Meryem El Berkaoui</u> , Mohamed-V University, Rabat, Morocco |
| Poster 6 | Modeling and Optimization of water recovery the sludge from beneficiation process of phosphate ore using Experimental Design Methodology, <u>Asmae El Agri</u> , Faculty of technical science Fès, Morocco | Poster 33 | Etude de la lixiviation chlorhydrique du minerai phosphate Marocain, <u>Marouane Amine</u> , University Cadi Ayyad, Marrakech, Morocco |
| Poster 7 | Criblage des paramètres d'un procédé de consolidation des boues issues d'un procédé d'enrichissement d'un minerai phosphaté par les plans d'expériences, <u>Asmae El Agri</u> , Faculté des Sciences et Techniques Fès, Morocco | Poster 34 | Valorisation of cellulosic waste basic cactus to prepare activated carbon, <u>Mourad Ouhammou</u> , Cadi Ayyad University, Marrakech, Morocco |
| Poster 8 | Malladrite form of hexafluorosilicate salts in wet phosphoric acid processes: solubility and characterisation in acidic aqueous solutions at T= 80°C, <u>ELYamani Yaktine</u> , Hassan II University Casablanca, Morocco | Poster 35 | Wastewater Treatment Plant Sludge Valorization in co-Digestion with Biomass Wastes to produce Bioenergy and Biochars as Fertilizers, <u>Doha El ALAMI</u> , Mohammed VI Polytechnic University, Benguerir, Morocco |
| Poster 9 | Etude d'impact de magnésium dans la fabrication de l'acide phosphorique (ACP) et son effet sur le comportement rhéologique de l'ACP, <u>Aziz Boukhsib</u> , Research and developpement business unit OCP Group JorfLasfar, Morocco | Poster 36 | Removal of dyes from wastewater using natural phosphate doped by TiO2 (NP-TiO2), <u>Meriem Joudi</u> , University Chouaib Doukkali El Jadida, Morocco |
| Poster 10 | Désulfatation de l'acide phosphorique 29% en P2O5 : Amélioration de la performance de l'unité de concentration, <u>Abderrahmane Aboulhassane</u> , University Chouaib Doukkali, El Jadida, Morocco | Poster 37 | Removal of disperse blue 165 from wastewater using Moroccan natural phosphate as an adsorbent: equilibrium, kinetics, and thermodynamics, <u>Jihane Mouldar</u> , University Chouaib Doukkali, El Jadida, Morocco |
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