

Revised: Aug. 1st, 2023

Monday 28 August 2023

08⁰⁰- 09⁰⁰ Registration

OPENING SESSION

ROOM 13

Chair: Anthimos Xenidis, Georgios Stasinou, Dimitris Kaliampakos

09⁰⁰-09³⁰ Welcome and brief introduction by the organizers

Anthimos Xenidis, Conference Chair

Georgios Stasinou, President, Technical Chamber of Greece

Dimitris Kaliampakos, Dean, School of Mining and Metallurgical Eng., NTUA

Andreas Boudouvis, Rector, National Technical University of Athens

09³⁰-10⁰⁰ Welcome speeches

Representatives of the Ministry of Environment and Energy

Representatives of the Ministry of Development and Investments

10⁰⁰-10¹⁵ Plenary lecture 1

PL01 **Konstantinos Yazitzoglou**, President of Greek Mining Enterprises Association

NON-critical raw materials. Can we afford to ignore them?

10¹⁵-10³⁵ Plenary lecture 2

PL-02 **Maria Nyberg**, European Commission, DG for Internal Market, Industry, Entrepreneurship and SMEs, unit 'Energy Intensive Industries, Raw Materials, Hydrogen'

European Critical Raw Materials Act Proposal for a Regulation-establishing a framework for ensuring a secure and sustainable supply of critical raw materials

10³⁵-11⁰⁰ Coffee Break – Poster session 1

ROOM 13

Chair: Anthimos Xenidis, Nikolaos Arvanitidis, Mark Rachovides

11⁰⁰-11¹⁵ Plenary lecture 3

PL-03 **Anna-Michelle Asimakopoulou**, Member of European Parliament

How Europe can win the race to secure its Critical Raw Material Needs

11¹⁵-11³⁰ Plenary lecture 4

PL-04 **Mark Rachovides**, President Emeritus Euromines

Opportunities, challenges and paradoxes in Raw Materials for Europe today

11³⁰-12⁰⁰ Plenary lecture 5

PL-05 **Antje Wittenberg**, Bundesanstalt für Geowissenschaften und Rohstoffe, **Daniel Oliveira**, LNEG, Chair of EuroGeoSurveys Mineral Resources Expert Group, Critical raw materials in Europe

Critical Raw Materials resource potential in Europe

12⁰⁰-12⁴⁵ Sponsors presentations

12⁰⁰-12¹⁵ **Filio Lanara**, Communication & Marketing Director, Corporate Affairs & Communication General Division MYTILINEOS Energy & Metals Representative of MYTILINEOS Energy & Metals`

Second International Conference on Raw Materials and Circular Economy

12¹⁵-12²⁵ **Panos Tserolas**, Sustainability Senior Manager of ElvalHalcor's Aluminium Rolling Division
Sustainability Senior Manager of ElvalHalcor's Aluminium Rolling Division

12²⁵-12³⁵ **Georgios Georgiadis**, Operational Excellence Manager of ElvalHalcor's Copper and Alloys Extrusion Division
Reuse, recycling and valorization

12³⁵-12⁵⁰ **Michalis Papatiriou**, Deputy General Manager of Operations, Hellas Gold

12⁵⁰-13⁰⁰ **Honorary Award to Dr. Nikolaos Arvanitidis for his pioneer work in the Development of Mineral Raw Materials in Europe**
Award presented by Mark Rachovides, President Emeritus Euromines, with testaments by friends and colleagues of Dr. Arvanitidis

13⁰⁰-14³⁰ *Lunch – Poster Session 1*

PARALLEL SESSIONS

SESSION A1

EU Strategy-Circular economy

📍 ROOM 13

Chair: Antje Wittenberg, Ioannis Paspaliaris

14³⁰-15⁰⁰ **Keynote presentation**
Mining wastes as potential sources for critical raw materials
KN-01 **Kaj Lax**, Geological Survey of Sweden

15⁰⁰-15¹⁵ **The Jevons Paradox and Vernon's Theory of Product Life Cycle: A Study of Copper and Aluminum Markets**
O-01 Antonio Alonso-Jimenez, Manuel Regueiro y González-Barros, Enrique Álvarez Areces

15¹⁵-15³⁰ **Characterization of waste from the dicalcium phosphate industry as a potential secondary source of YREEs**
O-02 Marcin Plachciak, Fidel Grandia, Vladimir Roddatis, Marcin Syczewski

15³⁰-15⁴⁵ **CO₂ utilization in Added-Value Construction Products from Magnesia Production**
O-03 Guilherme Rubio, David Konlechner

15⁴⁵-16⁰⁰ **A Proposal for the use of recycled aggregates in concrete in Greece**
O-04 Maria Nomikou, Charalampos Kouris, Thalassis Karkaletsis, Vasileios Kaloidas, Efstratios Badogiannis

16⁰⁰-16¹⁵ **Mining Wastes - An integrated thermochemical process for the conversion of multi-layer packaging waste into coal, hydrogen, and chemical flocculating agent**
O-05 Andrea Salimbeni, Marta Di Bianca, Andrea Maria Rizzo, David Chiaramonti

16¹⁵-16³⁰ **Benefits from the incorporation of ICME in the metallurgical industry**
O-06 Vasileios Loukadakis, Spyros Papaefthymiou

SESSION A2

Minerals Exploration and Resource Characterisation I

ROOM 5

Chair: Stefanos Kiliadis, Konstantinos Laskaridis

- 14³⁰-15⁰⁰ Keynote presentation**
Seabed mining and blue growth: Exploring the potential of marine mineral deposits as a sustainable source of strategic and critical raw materials
 KN-02 Francisco Javier Gonzalez
- 15⁰⁰-15¹⁵ Magnetite-hematite characterization at micron scale with implications for metallurgical processing and decarbonisation**
 O-07 Beate Orberger, Christiane Wagner Raffin, Omar Boudouma, Nicolas Rividi, Christine Bauer, Rebecca Wagner, Ghassem Nabatian, Maryam Honarmand, Iman Monsef
- 15¹⁵-15³⁰ Battery Mineral commodities characterisation – A case study for Nickel reference material**
 O-08 Lorenza Sardisco, Nikolaos Apeiranthitis, Sari Lukkari, Ester Jolis, Pasi Heikkila, Jesal Hirani, Johanna Tepsell, Tim Pearce, Alan Butcher
- 15³⁰-15⁴⁵ Application of portable spectroscopic tools in the exploration of manganese oxide minerals: the case study of Drama Mn-oxide deposits, Northern Greece**
 O-09 George Soulamidis, Marjolene Jatteau, Christina Stouraiti, Panagiotis Voudouris, Konstantinos Mavrogonatos, Konstantinos Soukis, Cécile Fabre, Marie-Camille Caumon, Jean Cauzid, Alexandre Tarantola
- 15⁴⁵-16⁰⁰ Fast and cost-effective quantitative assessment of the chemical and mineral composition of heavy mineral sands ores: an application to the Grande Cote Operation Ti-Zr mine of the new SOLSA combined XRF-XRD analytical solution.**
 O-10 Maud Herbelin, Sylvain Delchini, Henry Pilliere, Luca Lutterotti, Marion Nicco, Moctar Dia, Monique Le Guen, Thomas Riegler
- 16⁰⁰-16¹⁵ Exploration potential of Cu isotope fractionation in magmatic-hydrothermal Au-rich deposits in the Cyclades continental back-arc: insights from the Aegean Kolumbo submarine arc-volcano**
 O-11 Nikolaos Zegkinoglou, Stefanos Kiliadis, Ryan Mathur, Linda Godfrey, Vasilios Pletsas, Paraskevi Nomikou, Nina Zaronikola
- 16¹⁵-16³⁰ Assessing CRM's content of abandoned mine sites of Greece.**
 O-12 Vassiliki Angelatou, Athanasios Exikis, Adamantia Hatziapostolou

SESSION A3

Critical elements recovery from End-of-Life products

ROOM 6

Chair: Helena Soares, Paschalis Oustadakis

- 14³⁰-14⁴⁵ End-of-life mobile phones: re-thinking its recycling based on pillars of circularity and economic and environmental sustainability**
 O-13 Liliana Martelo, Márcia Silva, Cátia Graça, Marta Azevedo, Adrian Silva, Margarida Bastos, Helena Soares
- 14⁴⁵-15⁰⁰ Advances in the bioleaching of copper from end-of-life printed circuit boards**

Second International Conference on Raw Materials and Circular Economy

O-14 Alessandro Becci, Alessia Amato, Giulia Merli, José Miguel Rodríguez Maroto, Francesca Beolchini

15⁰⁰-15¹⁵ **Integrated production and recycling of silicon for pv application**

O-15 Gabriella Tranell, Maria Wallin, Nishan Simkhada, Mathilde Meling

15¹⁵-15³⁰ **Indium recovery from solar cell waste by means of layer-by-layer membrane filtration**

O-16 Meret Amrein, Michael Thomann, Frank Nüesch, Markus Lenz

15³⁰-15⁴⁵ **LCDs screens from smartphones wastes: towards a nearly circular and zero-waste process for recycling Indium plus other raw materials**

O-17 Liliana Martelo, Márcia Silva, Hugo Bacelo, Margarida Bastos, Helena Soares

15⁴⁵-16⁰⁰ **Beneficiation of Critical Metals from fine fraction of End-of-Life printed circuit boards, with the use of Column Flotation Process**

O-18 Kyriakos Syrmakezis, Kostas Tsakalakis

16⁰⁰-16¹⁵ **Impact of Extractant Type and pH on Yttrium Recycling from End of Life Fluorescent Lamp**

O-19 Tülay Koç Delice, Gülşah Türker, Hüseyin Eren Obuz; Belma Soydas

16¹⁵-16³⁰ **Hydrometallurgical recovery of tin from waste Printed Circuit Boards**

O-20 Dimitrios Vlasopoulos, Paschalis Oustadakis, Emmanouella Remountaki, Styliani Agatzini -Leonardou

16³⁰-17⁰⁰ *Coffee Break - Poster session 1*

SESSION A4

Advances in mineral processing technologies

📍 ROOM 13

Chair: Kostas Tsakalakis, Georgios Anastasakis

17⁰⁰-17³⁰ **Keynote presentation**

Evaluation of the processing routes for the “hard lithium” European deposits

KN-03 Lev Filippov, Inna Filippova

17³⁰-17⁴⁵ **Investigation of industrial residues and waste materials to expand the raw material base for the production of lightweight aggregates**

O-21 Jacob Fenner, Andrej Zeller, Steffen Liebezeit, Manuela Knorr, Alexander Schnell, Luka Mettke, Daniel Goldmann

17⁴⁵-18⁰⁰ **METALLICO EU PROJECT**

O-22 María González-Moya, Ana Lara

18⁰⁰-18¹⁵ **The applicability of screening and ore sorting to the beneficiation of low-grade gold ore from Western Australia**

O-23 Bogale Tadesse, Laurence Dyer

18¹⁵-18³⁰ **On the flotation of sulphide minerals using organosolv lignin as collector**

O-24 Panagiotis Angelopoulos, Nikolaos Kountouris, Georgios Anastasakis, Maria Taxiarchou

SESSION A5

Minerals Exploration and Resource Characterisation II

📍 ROOM 5

Chair: Kaj Lax, Francisco Javier Gonzalez

17⁰⁰-17³⁰ Keynote presentation

The environmental, social and governance challenges in the Lithium Triangle supply chain

KN-04 Evi Petavratzi, Andrew Hughes, Jonathan Ford

17³⁰-17⁴⁵ Bauxite Residue deposition in Corinth Gulf, Greece: a potential REE resource

O-25 Efthymios Douros, Margarita Iatrou, Nikolaos Sofis, Maria Elli Damoulianou, Georgios Papatheodorou, Stavros Kalaitzidis

17⁴⁵-18⁰⁰ Rare earth and trace element behaviour in different size fraction in an old uranium mine (centre-north of Portugal)

O-26 Andres Cardenas Nino, Maria Dias, Rosa Marques, Dulce Russo, Catarina Diamantino, Edgar Carvalho, Fernando Rocha, Maria Cristina Sequeira

18⁰⁰-18¹⁵ Mineral exploration at the Kimmeria Fe-skarn deposit, N. Greece: Reassessment and new perspectives focusing on the CRMs

O-27 Konstantinos Laskaridis, Michalis Fitros

18¹⁵-18³⁰ Mine and mineral exploration projects within the Natura 2000 areas: Case studies from northern Finland

O-28 Toni Eerola, Nike Luodes, Hannu Panttila

SESSION A6

Li-ion Batteries recycling

📍 ROOM 6

Chair: Panagiotis Xanthopoulos

17⁰⁰-17³⁰ Keynote presentation

The COOL-Process – a holistic recycling approach for lithium recovery

KN-05 Sandra Pavon Regana, Alexander Nickol, Sebastian Hippmann, Mareike Partsch, Alexander Michaelis

17³⁰-17⁴⁵ Development of a process for low-cost LFP batteries treatment

O-29 Rafaella - Aikaterini Megaloudi, Alexandros Galanes, Paschalis Oustadakis, Anthimos Xenidis

17⁴⁵-18⁰⁰ Closed-loop Recycling of Li, Ni, Co, and Mn From Spent NMC Batteries

O-30 Firat Tekmanlı, Hüseyin Eren Obuz, Bengi Yağmurlu

18⁰⁰-18¹⁵ Removal of metal contaminants from LFP black mass leachates

O-31 Ilias Lampropoulos, Daniel Reyes Martinez, Alexandra Thiere, Panagiotis Xanthopoulos, Anthimos Xenidis, Alexandros Charitos

18¹⁵-18³⁰ Investigation of recycling behaviour of lithium iron phosphate battery batteries with different thermal pre-treatments

O-32 Hüseyin Eren Obuz, Firat Tekmanlı, Luka Nils Mettke, Marius Müller, Bengi Yagmurlu

18³⁰-18⁴⁵ *Coffee Break - Poster session 1*

PLENARY LECTURES – Funding Opportunities for Research and Innovation Projects

📍 ROOM 13

Chair: Maria Taxiarchou, Vitor Correia

18⁴⁵-19⁰⁵ Plenary lecture 6

PL-06 **Dimitrios Biliouris**, Project Adviser for the Health and Digital Executive Agency (HaDEA)), European Commission

Horizon Europe raw materials funding opportunities

19⁰⁵-19²⁰ Plenary lecture 7

PL-07 **Antonis Politis**, EIT Raw Materials EIT RawMaterials' Eastern Co-Location Centre

19²⁵-19⁴⁵ Plenary lecture 8

PL-08 **Dina Carrilho**, PhD, ERA-MIN Joint Call Secretariat

Advances and contributions to the EU Raw Materials policies via Pan-European coordinated funding

20⁰⁰

Welcome reception – Zappeion (Peristilio)

Tuesday 29 August 2023

PARALLEL EVENT - Greece specific issues (in Greek)
Greece-specific issues (in Greek)
SESSION B1
New raw materials industrial projects in Greece

ROOM 13

Chair: Anthimos Xenidis, Peter Tzeferis

09⁰⁰-09¹⁵ Χρήστος Μπαλάσκας, Αντιπρόεδρος και Γενικός Διευθυντής Ελλάδας της Eldorado Gold, •
Μιχάλης Παπασωτηρίου, Αναπληρωτής Γενικός Διευθυντής Λειτουργιών, Ελληνικός Χρυσός
Υπό εξέλιξη μεταλλευτικά έργα της Ελληνικός Χρυσός (title tbc)

09¹⁵-09³⁰ Λάμπρος Μπίσαλας, Διευθύνων Σύμβουλος της Sunlight Group Energy Storage Systems
Παραγωγή και ανακύκλωση μπαταριών LFP (title tbc)

09³⁰-09⁴⁵ Δημήτριος Κούτρας, Βασίλειος Λάμπρος, ΕΛΛΗΜΕΤ ΑΕ
Μονάδα παραγωγής μεταλλουργικού πυριτίου (title tbc)
Μονάδα παραγωγής σιδηροχρωμίου υψηλής περιεκτικότητας άνθρακα (title tbc)

09⁴⁵-10⁰⁰ ΤΕΡΝΑ ΛΕΥΚΟΛΙΘΟΙ ΑΕ
(title tbd)

10⁰⁰-10¹⁵ Σκεύας Χρήστος, Διευθυντής Ελλάδος, ΕΛΛΗΝΙΚΑ ΟΡΥΚΤΑ ΑΕ
Το Νέο Έργο μεταλλευτικής έρευνας και εκμετάλλευσης βασικών και κρίσιμων μετάλλων
Μολάων Λακωνίας

10¹⁵-10³⁰ Ερωτήσεις - Συζήτηση

10³⁰-11⁰⁰ Coffee Break – Poster session 2

SESSION B4
Round table discussion

ROOM 13

Chair:

11⁰⁰-12¹⁵ Συζήτηση στρογγυλής τράπεζας ΣΥΝΤΟΝΙΣΤΗΣ:

To panel θα ανακοινωθεί σύντομα.

12¹⁵-13⁰⁰ Το μέλλον της εξορυκτικής βιομηχανίας

12¹⁵-12⁴⁰ Πορεία σχεδίου δίκαιης αναπτυξιακής μετάβασης για τη Δ. Μακεδονία και Μεγαλόπολη
Author to be confirmed

12⁴⁰-13⁰⁰ New International Call for Tenders for geothermal exploration in Greece
Georgios Tsifoutidis, Mineral Raw Materials Directorate, Greek Ministry of Environment and Energy

13⁰⁰-14³⁰ Lunch – Poster Session 2

PARALLEL SESSIONS

SESSION B2
ERA-MIN3 at RawMat2023

📍 ROOM 5

Chair: Francesca Beolchini

08³⁰-10³⁰ Sustainable Mining, Processing & Production Processes

Exploration

08³⁰-08⁴⁰ Critical metals and environmental risks: better understanding to better predict

O-33 Eric Gloaguen, Giada Iacono-Marziano, Pablo Higuera, Alexandre Lima, Fabienne Battaglia, Charles Gumiaux, Axel Aurouet, Daniel Pierre, Romain Augier, Laurent Guillou-Frottier, Johann Tuduri, Anthony Pochon

08⁴⁰-08⁵⁰ Multi-scale and interdisciplinary approaches to the granite-related ore-forming systems in the Segura-Argemela-Panasqueira-Góis belt (Portugal); insights for innovative exploration surveys

O-34 Antonio Mateus, Michel Cathelineau, Colombo Tassinari, Marie-Christine Boiron, Maria Helena Hollanda, Rute Salgueiro, Alexandra Guedes, Patrícia Moita, Alcides Pereira

08⁵⁰-09⁰⁰ Regional to Deposit scale exploration (D-Rex) project

O-35 Maxim Smirnov, Jochen Kamm, Graham Hill, Jan Vozar

Sustainable Mining Operations

09⁰⁰-09¹⁰ The cuttability of carbonate rocks using a new microwave-assisted laboratory cutting machine

O-36 Sair Kahraman, Ramazan Çomakli, Masoud Rostami

09¹⁰-09²⁰ Use of nanobubble technology in the development of next-gen sustainable liquid mining and phytoextraction processes for the recovery critical and strategic metals

O-37 Georgios Kolliopoulos, Nicolas Kalogerakis, Kostas Komnitsas, Quartus Paulus Botha

09²⁰-09³⁰ Project REVIVING – Bio- Remining mine tailings to the production of critical metals

O-38 Paula Morais, Rita Branco

Ore Processing

09³⁰-09⁴⁰ The MiCCuR project for improved copper recovery from chalcopyrite

O-39 Mark Dopson

09⁴⁰-09⁵⁰ Recovery of rare earth elements from complex ores in Turkey and their potential use in high tech industrial applications

O-40 Belma Soydaş Sözer

09⁵⁰-10⁰⁰ Electro-electrodialysis technology on the copper electrorefining operation for the recovery of antimony and recycling of the solution media

O-41 Manuel César Martí-Calatayud, Lorena Hernández-Pérez, Andréa Bernardes, Marco Antonio Rodrigues, Gerardo Cifuentes, Gabriel Riveros, Valentín Pérez-Herranz

Closing cycles in mining and production

10⁰⁰-10¹⁰ MINECO – New eco-innovative materials for mining infrastructures

O-42 Tiago Miranda, Nuno Cristelo

10¹⁰-10²⁰ REEScue-An Integrated process for the recovery of Rare Earth Elements and Scandium from Bauxite Residues

O-43 Paschalis Oustadakis, Panagiotis Angelopoulos, Maria Georgiou, Ioannis Paspaliaris, Murat Kabataş, Tuğba Selcen Atalay Kalsen, Hakan Burak Karadağ, Yasin Ramazan Eke, Bayram Ünal, Meral Baygöl, Gökhan Demir, Sedat Arslan, Panagiotis Davris, Efthymios Balomenos, Gheorghe Dobra, Alina

1st Draft Detailed Program

Boiangiu

10²⁰-10³⁰ SMART Geopolymers
 O-44 Dinos Sakkas, Silviana Onisei, Hubert Rahier

SESSION B3 Energy and CO₂ storage

📍 ROOM 6

Chair: Vassilis Gaganis, Charis Vasilatos

09⁰⁰-09¹⁵ Carbon dioxide storage in depleted oil fields
 O-45 Georgios Avraam, Konstantinos Vatalis

09¹⁵-09³⁰ A unified approach to describe flow dynamics in geothermal energy production systems
 O-46 Stefanos Lempesis, Sofianos Panagiotis Fotias, Vassilis Gaganis

09³⁰-09⁴⁵ Energy Transition and Evaporitic formations utilization as potential subsurface storage for H₂ and CO₂
 O-47 Spyridon Bellas, Emmanuel Stamatakis, Ioannis Vakalas

09⁴⁵-10⁰⁰ Sensitivity of CO₂ flow in production/injection wells in CPG (CO₂ Plume Geothermal) systems
 O-48 Sofianos Panagiotis Fotias, Sofia Stamataki, Vassilis Gaganis

10⁰⁰-10¹⁵ Optimizing Geothermal Energy Extraction in CPG (CO₂ Plume Geothermal) systems
 O-49 Sofianos Panagiotis Fotias, Spyridon Bellas, Vassilis Gaganis

10¹⁵-10³⁰ Well Control Strategies for Effective CO₂ Subsurface Storage: Optimization & Policies
 O-50 Ismail Ismail, Vassilis Gaganis

10³⁰-11⁰⁰ Coffee Break – Poster session 2

PARALLEL SESSIONS

SESSION B5 ERA-MIN3 at RawMat2023

📍 ROOM 5

Chair: Francesca Beolchini

11⁰⁰-13⁰⁰ Recycling of EoL products and immovable assets
Battery recycling

11⁰⁰-11¹⁰ Challenges and opportunities for recycling of spent lithium ion batteries – a summary of results of the NEXT-LIB project
 O-51 Guozhu Ye

11¹⁰-11²⁰ Biotechnological recycling and recovery of metals from waste printed circuit boards & spent Li ion batteries- ERAMIN EU BaCLEM Project
 O-53 Sandeep Panda, Ata Akcil, Stoyan Gaydardzhiev, Eric van Hullebusch

Magnets and E-Waste

11²⁰-11³⁰ Recovery of valuable metals from Nd-Fe-B magnet leach liquor using antisolvent crystallization

and non-aqueous ion exchange

O-54 Brecht Dewulf, Dženita Avdibegović, Kerstin Forsberg, Srečo Škapin, Koen Binnemans

11³⁰-11⁴⁰ Siderophores assisted recovery of Ga, In from the end-of-the life product

O-56 Rohan Jain, Christian Hintersatz, Kun Zheng, Katrin Pollmann, Eric van Hullebusch, Luis Rojas

Minerals Material Cycles

11⁴⁰-11⁵⁰ Evaluation of EOL Materials as SCMs for OPC

O-57 Mehmet Ali GULGUN, Mirijam Vrabc, Saso Sturm, Bogdan Stefan VASILE, Clea Ow-Yang, Zeynep Başaran Bundur, Adrian Ionut NICOARA, Sorour Samsari Parapari, Yasemin Akyol, Kosar Hassan Nezhad, Otilia Ruxandra VASILE

11⁵⁰-12⁰⁰ ReFina - Novel methods for enhanced recovery of metals and minerals from fine incineration ash

O-58 Héctor Muñiz Sierra, Michal Šyc

12⁰⁰-12¹⁰ PROPER: New sustainability metrics to improve refractories recycling performances regarding resource use, environmental impacts and economic benefits

O-59 Stephanie Muller, Frédéric Lai, Antoine Beylot, Ambroise Lachat, Tom Huppertz, Elisabeth van Overbeke, Quentin Ricoux

Enabling circular economy

12¹⁰-12²⁰ RedOx Recycling - A new approach for the recovery of gold from E-waste

O-60 Claudio Baldizzone

12²⁰-12³⁰ LiCoBAT - Lithium and Cobalt recovery from batteries coming from the reverse logistics chain of WEEE

O-61 JoseRocha Andrade da Silva

12³⁰-12⁴⁰ End-of-life Li-ion Battery Management Integration and Technology Evaluation

O-62 Rudolph van Schalkwyk, Ersin Yazici, Jan Ots, Erik Emilsson, Martina Petranikova, Esra Eken Torunoglu, Alexandra Wu, Hacı DEVECİ, Guven Akdogan, Louis Louw, Nilay Elginöz Kanat, Roelof Maritz, Dominic Vooght, Theuns Kuhn, Ayse Nur Ozturk, Henric Lassesson, Christie Dorfling

SESSION B6

Environment and Sustainability I

📍 ROOM 6

Chair: Nikos Kalogerakis, Ariadne Argyraki

11⁰⁰-11¹⁵ Immobilization of Rare Earth Elements and Yttrium (REY) by iron (bio)precipitation in sulphated acid waters from El Bierzo (Spain)

O-63 Blanca Rincón-Tomás, Francisco Javier Gonzalez, Enrique López-Pamo, Esther Santofimia

11¹⁵-11³⁰ First study of microbial diversity living at Nisyros volcano extreme environment - Future applications

O-64 Vassiliki Angelatou, Stefano Fazi, Franco Tassi, Orlando Vaselli, Georges Vougioukalakis

11³⁰-11⁴⁵ Grain size distribution of rare earth elements in a passive treatment system installed in a legacy polymetallic sulfide mine in Portugal

O-65 Cynthia Obregón Castro, Isabel Prudêncio, João Carlos Waerenborgh, Bruno Vieira, Dulce Russo, Catarina Diamantino, Edgar Carvalho, Rosa Marques

11⁴⁵-12⁰⁰ Long-term assessment of surface cover geochemical characteristics of a treated sulfidic mining waste pile in Lavrion, Greece

O-66 Ariadne Argyraki, Zacharenia Kypridou, Khaled Imbrahim

1st Draft Detailed Program

- 12⁰⁰-12¹⁵** Risk assessment of Metal transportation mechanism from mining source by rainfall runoff as a contribution to the bioaccumulation in seafood
O-67 Rafi Ullah, Shaikh Mohiuddin
- 12¹⁵-12³⁰** Environmental assessment of replacing fossil fuels with hydrogen for motorized equipment in the mining sector
O-68 Antonis Peppas, Sotiris Kottaridis, Chrysa Politi, Paschalis Oustadakis
- 12³⁰-12⁴⁵** A scenario-based analysis for the selection of post-mining land uses applying a cellular automata model
O-69 Konstantinos Karalidis, Christos Roumpos, Aikaterini Servou, Nikolaos Paraskevis, Francis Pavloudakis
- 12⁴⁵-13⁰⁰** Towards the exploitation of unconventional heavy oils: Electrostatic technologies for the minimization of dehydration cost
O-70 Christina Argyropoulou, Vassilis Gaganis, Dimitris Marinakis

13⁰⁰-14³⁰ Lunch – Poster Session 2

PARALLEL SESSIONS

SESSION B7

Mining: Trends and perspectives I

📍 ROOM 13

Chair: Ioannis Kapageridis, Christos Roumpos

- 14³⁰-15⁰⁰** Keynote presentation
Mining and Challenges for the Transformation in Energy Sector
KN-06 Carsten Drebenstedt
- 15⁰⁰-15¹⁵** Evaluation methodology of open pit mine overall slope failure risks
O-71 Natalija Pavlovic, Branko Petrovic, Tomislav Subaranovic
- 15¹⁵-15³⁰** A Glimpse to a Holistic Approach to Environmental Monitoring of the Kolumbo Submarine Volcano with Implications for Deep Seafloor Mining, Ocean Governance and Policy
O-72 Stephanos Kiliadis, Vasilios Pletsas, Nikolaos Zegkinoglou, Paraskevi Nomikou, Theodoros Mertzimekis, Paraskevi Polymenakou, Andreas Gondikas
- 15³⁰-15⁴⁵** Narrow Reef Mining (NRE) – innovative mining technology for narrow, sub-horizontal PGE ore bodies
O-73 Vječislav Bohanek, Luka Petro, Sibila Borojević Šoštarić
- 15⁴⁵-16⁰⁰** Using force field analysis for examining and managing the stakeholders' perceptions in mining projects
O-74 Francis Pavloudakis, Philip-Mark Spanidis, Christos Roumpos
- 16⁰⁰-16¹⁵** Application of International Standards to Evaluate the Potential of Sustainable Secondary Production of Tin and Tungsten in Portugal
O-75 Md Ariful Islam, José Brito Iria, Georg Meißner, George Barakos, Helmut Mischo
- 16¹⁵-16³⁰** Machine Learning Techniques to model and predict airflow requirements in underground mining

0-76 [Maria Karagianni](#), [Andreas Benardos](#)

SESSION B8
ERA-MIN3 at RawMat2023

📍 ROOM 5

Chair: [Pontus Westrin](#)

14³⁰-16³⁰ ERA-MIN SRIA workshop

It aims to collect feedback and expert opinions on the new Strategic Research and Innovation Agenda on raw materials within the scope of ERA-MIN

SESSION B9
Environment and Sustainability II

📍 ROOM 6

Chair: [Toni Eerola](#), [Antonis Peppas](#)

14³⁰-14⁴⁵ Reconciliation conflicting societal objectives: Nature protection vs. raw materials supply resilience

0-77 [Vitor Correia](#), [Eberhard Falck](#)

14⁴⁵-15⁰⁰ Assessment of the environmental behavior of phosphogypsum with the application of lab-scale experimentation

0-78 [Georgios Gaidajis](#), [Maria Pliaka](#)

15⁰⁰-15¹⁵ Can We Alleviate the NIMBY Effect?

0-79 [Demetrios Constantinides](#)

15¹⁵-15³⁰ Remote Sensing Analysis for Flood Detection in Complex Surface Mining Areas Using Satellite Data

0-80 [Konstantinos Karalidis](#), [Georgios Louloudis](#), [Christos Roumpos](#), [Eleni Mertiri](#), [Francis Pavloudakis](#)

15³⁰-15⁴⁵ Durability of red-mud concrete pavement slabs

0-81 [Aggeliki Skaropoulou](#), [Konstantinos Tsvolas](#), [Ioanna Angelou](#), [Konstantinos Sakkas](#), [Christos Georgopoulos](#), [Maria Taxiarchou](#), [Efstratios Badogiannis](#)

15⁴⁵-16⁰⁰ Investigation of thermal behavior of cementitious pastes, mortars and concrete- Effect of Closed Structured Expanded Perlite addition

0-82 [Chrysanthi Panagiotopoulou](#), [Maria Taxiarchou](#), [Iliana Douni](#), [Katerina Maliachova](#), [Aggeliki Skaropoulou](#), [Ioanna Angelou](#), [Stratis Badogiannis](#)

16³⁰-17⁰⁰ Coffee Break – Poster session 2

SESSION B10
Mining: Trends and perspectives II

📍 ROOM 13

Chair: [Michail Galetakis](#), [Ioannis Kapageridis](#)

17⁰⁰-17¹⁵ Artificial Intelligence Engineering System for a Tailings Storage Facility

0-84 [Bartłomiej Bursa](#), [Paweł Stefanek](#), [Paweł Stefaniak](#), [Bartosz Świdorski](#)

17¹⁵-17³⁰ Onsite characterisation of magnesite and laterite mining blocks by using novel sensing technologies – An experimental approach

0-85 [Basileios Deligiorgis](#), [Declan Vogt](#), [Ferenc Má dai](#), [Michail Galetakis](#)

17³⁰-17⁴⁵ Risk analysis in underground marble quarries using geotechnical data from monitoring equipment

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- 0-86 Christos Gravalos, Lampros Lamprinidis, [Ioannis Kapageridis](#)
- 17⁴⁵-18⁰⁰ Applying Model-Based Systems Engineering to Tailings Storage Facility Structures**
0-87 [Bartłomiej Bursa](#), Paweł Stefaniak, Ioannis Kakogiannos
- 18⁰⁰-18¹⁵ Industry 4.0 roadmap for the mining industry**
0-88 [Doris Skenderas](#), Chrysa Politi
- 18¹⁵-18³⁰ Machine Learning Based Domaining of a Porphyry Copper-Gold Deposit**
0-89 [Ioannis Kapageridis](#), Agni Patra, Argyro Asvesta, Ioannis Sinatkas
- 18³⁰-18⁴⁵ Transforming decommissioned mines to gravity energy storage system**
0-90 [Michail Galetakis](#), Georgios Biotakis, Basileios Deligiorgis, Emmanouil Varouchakis
- 18⁴⁵-19⁰⁰ Multi-risk assessment in post-mining lignite areas**
0-91 Dafni Nalmpant-Sarikaki, Alexandros Theocharis, Nikolaos Koukouzas, Andreas Benardos, [Ioannis Zevgolis](#)

SESSION B11

Hydrometallurgical processes for metals recovery from EoL and ores

📍 ROOM 5

Chair: *Sofía Riaño, Efthymios Balomenos*

- 17⁰⁰-17¹⁵ Recycling platinum and palladium from autocatalysts: searching for alternative processes combining efficiency with environmental sustainability**
0-92 [Hugo Bacelo](#), Michiel de Brauwer, Liliana Martelo, Helena Soares
- 17¹⁵-17³⁰ Gold recovery from integrated circuits: proposal of an innovative and greener hybrid process**
0-93 [Márcia Silva](#), Liliana Martelo, Margarida Bastos, Helena Soares
- 17³⁰-17⁴⁵ Leaching and recovery of gold from ores using alternative lixivants to cyanide**
0-94 Maria Taxiarchou, Ioannis Paspaliaris, [Nymphodora Papassiopi](#), Katerina Adam
- 17⁴⁵-18⁰⁰ Solvent extraction for iron removal and HCl recovery from Ni/Co pregnant leach solutions: flowsheet optimization and thermodynamic modelling**
0-95 [Brecht Dewulf](#), Rayco Lommelen, Koen Binnemans, Sofía Riaño
- 18⁰⁰-18¹⁵ Gold recovery from refractory auriferous sulphides applying the Platsol Process**
0-96 [Nymphodora Papassiopi](#), Paschalis Oustadakis, Panagiota Georgopoulou, Evangelia Mylona, Maria Taxiarchou, Ioannis Paspaliaris, Katerina Adam
- 18¹⁵-18³⁰ An innovative approach for the crystallization of battery grade cobalt sulfate**
0-97 [Luka Nils Mettke](#), Marius Müller, Bengi Yağmurlu
- 18³⁰-18⁴⁵ Recovery of antimony from alkaline sulphide leaching solutions**
0-98 Marianna Stathogianni, [Rafaella - Aikaterini Megaloudi](#), Paschalis Oustadakis, Anthimos Xenidis

SESSION B12

OSH and EPD Reporting

📍 ROOM 6

Chair: *George Barakos, Katerina Adam*

- 17⁰⁰-17³⁰ Keynote presentation**

Second International Conference on Raw Materials and Circular Economy

Occupational Health and Safety in industry-improvements and perspectives

KN-07 Rena Bardani

17³⁰-17⁴⁵ The experience on the implementation of Risk Management in OSH and environmental issues in the extractive companies

O-99 Petros Maraboutis, [Niki Iliana Poulimenou](#), Elena Nikolaou

17⁴⁵-18⁰⁰ Piloting the establishment of soil geochemical baselines for Potentially Toxic Elements (PTEs) in Greece- Preliminary results from Attica and Boeotia

O-100 [Artemis Kontomichalou](#), Alexandros Liakopoulos, Ariadne Argyraki, Zacharenia Kypritidou, Fotini Botsou, Antonis Vlastos

18⁰⁰-18¹⁵ Evaluation of occupational health and safety issues in coal mining Industry

O-101 [Petkani Zoi](#), Vatalis Konstantinos

18¹⁵-18³⁰ Understanding the Social License to Operate from a Cultural Perspective: The case studies of Australia, Greece, and India

O-102 Chrysanthi Rodolaki, [George Barakos](#)

18³⁰-18⁴⁵ EPD reporting in the metal and mineral sector

O-103 [Maria Vastardi](#), Eugenia Filtikaki, George Mavraganis, Katerina Adam

18⁴⁵-19⁰⁰ Sustainability Reporting in the Raw Materials Industry

O-104 [Eugenia Filtikaki](#), Maria Vastardi, Katerina Adam

19⁰⁰

End of sessions

20⁰⁰

Gala dinner

Wednesday 30 August 2023

PLENARY LECTURES

ROOM 13

Chair: Anthimos Xenidis, Petros Koutsovitis, Stavros Kalaitzidis

09⁰⁰-09³⁰ Plenary lecture 9

Gian Andrea Blengini, Politecnico di Torino

PL09 *From List of Critical Raw Materials to List of critical projects*

09³⁰-10⁰⁰ Plenary lecture 10

Slavko Solar

PL10 *The Application of United Nations Framework Classification for Resources (UNFC) to European Mineral Deposits*

10⁰⁰-10³⁰ Plenary lecture 11

Rene Sterk

PL11 *The JORC Code – Current Status, Updates and Implications for Professionals*

10³⁰-11⁰⁰ Coffee Break – Poster session 3

PARALLEL SESSIONS

SESSION C1

Critical metals recovery from mining/metallurgical waste

ROOM 13

Chair: Angel Lopez-Buendia, Dimitris Panias

11⁰⁰-11³⁰ Keynote presentation

Holistic valorisation of bauxite residue: Results from pilots demonstrations

KN-08 **Efthymios Balomenos**, Mytilineos SA

11³⁰-11⁴⁵ Efficient Use of Sulfuric Acid in Bauxite Residue Leaching

O-105 Aikaterini Toli, Danai Marinos, Maria Psoma, Dimitrios Kotsanis, Panagiotis Davris, Efthymios Balomenos, Dimitrios Panias

11⁴⁵-12⁰⁰ HCl- based leaching method for extracting Ni/Co from ore deposits and tailings

O-106 Seyedehmaryam Sadeghi, Sofia Riaño, Koen Binnemans, Stylianos Tampouris, Vitalis Chipakwe

12⁰⁰-12¹⁵ Microwave roasting of bauxite residues

O-107 Angel Lopez-Buendia, Eduardo Brau, Efthymios Balomenos

12¹⁵-12³⁰ Alumina and iron recovery from the BR-Ca reduced pellets by simultaneous magnetic separation and alkali leaching

O-108 Manish Kumar Kar, Jafar Safarian, Casper van der Eijk

12³⁰-12⁴⁵ Recovery of copper and zinc from ash from incinerated municipal waste

O-109 Ragnhild Dirdal, Aslak Skåra, Erik Nedkvitne, Jon Omtvedt, Dag Ø Eriksen

12⁴⁵-13⁰⁰ Unlocking the Potential of Bauxite Residue: A Comparative Exergy Analysis of Emerging Valorization Techniques

O-110 Eleni Mikeli, Efthymios Balomenos, Dimitrios Panias

SESSION C2

Substitution and Recycling of Critical Raw Materials in the Automotive Sector - The Industrial Perspective

📍 ROOM 5

Chair: Iakovos Yakoumis

- 11⁰⁰-11¹⁵ Raw Materials Act - opportunities in recycling and substitution for Industry, from Innosup Mine The Gap, to I3 and Regional Innovation Valleys**
O-111 Santiago Cuesta Lopez, Icamcyl, Spain
- 11¹⁵-11³⁰ Promoting Sustainable Value Chains: Ford Otosan's Approach to Critical Raw Materials Recovery**
O-112 Mehmet Celik, Ford Otosan, Turkey
- 11³⁰-11⁴⁵ Recycling of lithium ferrophosphate (LFP) batteries in Greece**
O-113 Panagiotis Xanthopoulos, Sunlight Energy Group, Greece
- 11⁴⁵-12⁰⁰ Recovering and Substituting of Noble Metals from Fuel Cells and Electrolyzers**
O-114 Christos Chochos, Advent Technologies, Greece
- 12⁰⁰-12¹⁵ Recovering and Substituting of Rare Earth Elements from Permanent Magnets**
O-115 Milana Karajic, Magneti, Slovenia
- 12¹⁵-12³⁰ Recovering of Critical Raw Materials from Electric and Electronic Devices**
O-116 Teresa Sessa, TREEE, Italy
- 12³⁰-12⁴⁵ Universal Hydrometallurgical Up-Scaled Process for Recovering Critical and Strategic Materials from Automotive EoL Streams**
O-117 Anastasia-Maria Moschovi, Monolithos Catalysts & Recycling Ltd., Greece
- 12⁴⁵-13⁰⁰ Roundtable discussion**

SESSION C3

Industrial minerals and Waste reuse - valorization I

📍 ROOM 6

Chair: Charis Vasilatos, Kostas Komnitsas

- 11⁰⁰-11³⁰ Keynote presentation**
Pathways towards Sustainability and Decarbonisation in the Construction Industry: The Role of Industrial Minerals and Geopolymers
KN-09 Maria Taxiarchou, National Technical University of Athens
- 11³⁰-11⁴⁵ Creating public acceptance in building products made from metallurgical wastes**
O-118 Efthymios Balomenos, Nikolaos Patsavos, Alexandros Peteinarelis, Panagiotis Davris, Grigorios Paschalis
- 11⁴⁵-12⁰⁰ Composite lightweight materials with upgraded physicochemical functionality and improved economic feasibility**
O-119 Antonia Ekonomakou, Xenofon Simos, Ioanna Kitsou, Michaela Papageorgiou, Maria Eleni Mamassi, Theodoros Gikarakis, Achilleas Amanatidis, Georgios Anastasakis, Athena Tsetsekou
- 12⁰⁰-12¹⁵ Factors affecting the properties of slag-based alkali activated materials**
O-120 Kostas Komnitsas, Vasiliki Karmali, Dimitra Vathi, Lefteris Kaklamanos
- 12¹⁵-12³⁰ Li extraction from a-spodumene concentrate by carbonizing calcination**
O-121 Katerina Maliachova, Nikos Doukas, Danai Tsakiri, Michail Samouhos, Lefkothea Sakellariou, Iliana

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Douni, Maria Taxiarchou, Ioannis Paspaliaris

12³⁰-12⁴⁵ Crystalline and Amorphous Phases in Fe-Rich Slags: Implications for As and Sb leaching Behaviour

0-122 [Konstantina Koukouza](#), Glenn Beersaerts, Valérie Cappuyens, Yiannis Pontikes

12⁴⁵-13⁰⁰ Eco-friendly composites – environmental assessment of mine tailings based geopolymers

0-123 [Kinga Korniejenko](#), Beata Figiela, Michał Łach, Barbara Kozub

13⁰⁰-14³⁰ Lunch – Poster Session 3

PARALLEL SESSIONS

SESSION C4

Magnets and REEs

📍 ROOM 13

Chair: Kerstin Forsberg, Stavros Kalaitzidis

14³⁰-14⁴⁵ High-performance solid phase extraction chromatography for recycling of NdFeB magnet waste.

0-124 [Tiaan Punt](#), Kerstin Forsberg, Michael Svärd

14⁴⁵-15⁰⁰ Advancing sustainable magnets for electric mobility and renewable energy: Innovating processing and recycling routes for Nd-Fe-B permanent magnets

0-125 [Kristina Žužek](#), Tomaž Tomše, Mihaela Rebernik, Sina Khoshsima, Amit Mishra, Sorour Semsari Parapari, Spomenka Kobe, Laurence Schieren, Carlo Burkhardt, Sašo Šturm

15⁰⁰-15¹⁵ Process mineralogy applied to mineral processing for the development of REE deposits

0-126 Tassos Grammatikopoulos, [Stavros Kalaitzidis](#)

15¹⁵-15³⁰ Investigation and Optimization of the Chemical and Operational Parameters of the Stripping Process Using Oxalic Acid to Recycle REEs from Permanent Magnets

0-127 [Soroush Rahmati](#), Ionela Birloaga, Francesco Vegliò

15³⁰-15⁴⁵ Potential application of modified diglycolamide resin For Rare Earth Element extraction

0-128 [Junnile Romero](#), Carlito Tabelin, Ilhwan Park, Richard Alorro, Leaniel Silva, Joshua Zoleta, Takunda Mandu, Kosei Aikawa, Mayumi Ito, Steffen Happel, Naoki Hiroyoshi, Vannie Joy Resabal

15⁴⁵-16⁰⁰ Recovery of Scandium from industrial acidic solutions through ion-exchange

0-129 [Eleni Mikeli](#), Aikaterini Toli, Danai Marinos, Efthymios Balomenos, Dimitrios Panias

16⁰⁰-16¹⁵ Utilization of graphite industrial wastes for the sustainable production of silicon carbide

0-130 Charikleia Vourgidi, [Ioanna Giannopoulou](#), Apostolos Kourtis, Maria Magganiari, Anthimos Xenidis

SESSION C5

Energy transition metals - ENICON & EXCEED HE projects)

📍 ROOM 5

Chair: Kostas Komnitsas

14³⁰-14⁴⁰ Energy transition metals: Future demand and low carbon processing technologies

0-132 [Kostas A Komnitsas](#), Ilias Lazos, Toni Eerola

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14⁴⁰-14⁵⁵ Challenges in Li minerals recovery from different deposits

O-133 Lev Filippov

14⁵⁵-15¹⁰ Exploring barriers to the implementation of circular economy processes for batteries

O-134 Vasileios Rizos, Patricia Urban

15¹⁰-15²⁵ Preliminary assessment of the social license to operate in four European lithium projects

O-135 Toni Eerola, Kostas Komnitsas

15²⁵-15⁴⁰ Strategic and critical raw materials in the battery supply chain - skills, education and training

O-136 Kulczycka Joanna

15⁴⁰-15⁵⁰ Round table discussion including representatives from Larco, Euronickel and Sunlight

15⁵⁰-15⁶⁰ Q and A

SESSION C6

Reuse-Recycling and Valorisation II

📍 ROOM 6

Chair: Clive Mitchell, Vasilis Melfos

14³⁰-14⁴⁵ Fuelling the Foundation Industries: discovering the hidden value of mineral waste in the UK

O-137 Clive Mitchell

14⁴⁵-15⁰⁰ EcoGlassFab: Eco-Glass-Fabrication from the assembly of secondary precursors

O-138 Sophie Schuller, Kahina Hamadache, Frédéric Angeli, Frederic Goettmann, Benoit Darbouret, Frédéric Boissumeau

15⁰⁰-15¹⁵ Valorizing mineral wool ash as a supplementary cementitious materials

O-139 Tolga Aydin, Zeynep Başaran Bundur, Kaan Aksoy, Turker Ince, Ezgi Perin, Baris Karabiyik, Mihriban Sari

15¹⁵-15³⁰ Microwave chemistry for enhanced carbon capture by serpentine quarry waste

O-140 Marcello Campione

15³⁰-15⁴⁵ Effect of by-pass filter dust on durability of self-compacting concrete

O-141 Andreas Kounadis, Konstantinos Tsivolas, Efstratios Badogiannis

15⁴⁵-16⁰⁰ How to convert your waste into a resource?

O-142 Duane Runciman, Matt Dey

16⁰⁰-16¹⁵ Production and Use of Aplite Sodium Silicate as an Alternative Activator for Geopolymer Synthesis

O-143 Georgia Maria Tsaousi, Georgia Flessoura, Dimitrios Panias

16¹⁵-16³⁰ Optimization of the demolition waste incorporation to cement mortar by response surface methodology

O-144 Ikbel Bejaoui, Halim Hammi, Khaoula Mkadmini, Rym Abidi

16³⁰-17⁰⁰ Coffee Break – Poster session 3

PARALLEL SESSIONS

SESSION C7

Advanced metallurgical processes

📍 ROOM 13

Chair: Casper van der Eijk, Dimitris Panias

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- 17⁰⁰-17³⁰ Keynote presentation**
The possibilities and limitations of the use of hydrogen in different metallurgical sectors
KN-10 Casper van der Eijk, Jafar Safarian, Halvor Dalaker
- 17³⁰-17⁴⁵ Isothermal Pre-reduction behaviour of Nchwaning Manganese Ore in H₂ atmosphere**
O-145 Alok Sarkar, Trygve Lindahl Schanche, Jafar Safarian
- 17⁴⁵-18⁰⁰ Optimization of Fe, Al, and Na recovery from H₂ Reduced Bauxite Residue (Red mud) using Response surface methodology (RSM)**
O-146 Ganesh Pilla, Tobias Hertel, Bart Blanpain, Yiannis Pontikes
- 18⁰⁰-18¹⁵ Contribution to the reassessment of management strategies for the optimization of the pyrometallurgical treatment of nickeliferous laterites, based on the recent industrial experience on smelting reduction process.**
O-147 Charalabos Zografidis
- 18¹⁵-18³⁰ Exploring the leaching potential of lemonitic laterites with nitrate solutions**
O-148 Iraklis Varsamos, Paschalis Oustadakis, Konstantinos Betsis, Anthimos Xenidis
- 18³⁰-18⁴⁵ Aluminothermic reduction of iron and titanium from metallurgical wastes**
O-149 Dimitris Sparis, Efthymios Balomenos, Dimitrios Panias
- 18⁴⁵-19⁰⁰ Wastes from olive oil production as a perspective component for biocoke production**
O-150 Małgorzata Wojtaszek-Kalaitzidi, Michał Rejda, Michał Książek, Sten Yngve Larsen, Stavros Kalaitzidis

SESSION C8

Experts Panel Discussion

📍 ROOM 5

Moderators: Thymis Balomenos, Beate Orberger

- 17⁰⁰-19⁰⁰ How can EU Critical Raw Materials extraction from waste or low-grade ore compete with Asian production?**
- The Sulphate Process and its role in a Chemical Production Network**
O-151 Maurits Van den Berg, Venator
- Industrial Minerals: The sleeping giant of European CRM resources?**
O-152 Anastasios Kladis, AdMiRIS
- Waste to resource - secondary resourcing from waste**
O-153 Duane Runciman, Mures Magnesium Srl.
- Gallium Supply Chain - EU Resilience**
O-154 Stefan Eichler, Freiburger Compound Materials
- A European Stockpile Organization is a must have for Europe to reduce its supply disruptions for Critical Materials**
O-155 Henk Van der Laan, VIC

SESSION C9

Education

📍 ROOM 6

Chair: George Barakos, Maria Menegaki

17⁰⁰-17³⁰ Keynote presentation

European Universities and New Tools in the Raw Materials Education

KN-11 **Katerina Adam**, National Technical University of Athens

17³⁰-17⁴⁵ TIMREX – an EIT labelled master programme in innovative mineral exploration

O-156 Sibila Borojević Šoštarić, Ferenc Madai, Gabriela Paszkowska, Nils Jansson

17⁴⁵-18⁰⁰ Integrated Mine Planning Education for the Modern Engineer

O-157 Ioannis Kapageridis, Kyros Koios

18⁰⁰-18¹⁵ The interactive advancement of the Australian Mining Industry and Academia toward the sustainable supply of critical raw materials

O-158 George Barakos, Danielle Thompson, Michael Hitch

18¹⁵-18³⁰ Program for achieving progress in transfer the science to business developed within teaching project for staff at Eastern and Southeastern European universities

O-159 Malwina Kobyłańska, Agnieszka Urbańska-Ciszek

18³⁰-18⁴⁵ Discussion on Knowledge Gaps in Mining Operations: Empirical Evidence from the Greek Mining Industry

O-160 Philip-Mark Spanidis, Francis Pavloudakis, Christos Roumpos

19⁰⁰ Closing ceremony-Awards

POSTER SESSION 1
**EU Strategy on Circular economy / Mineral exploration and characterization /
Mineral Processing / EoL products / LiBs**
Monday 28 August 2023
ROOM 16

- P1-01** **Effect of thermal treatment on flotation and leaching in EV lithium-ion battery recycling**
Marius Müller, Luka Nils Mettke, Bengi Yagmurlu
- P1-02** **Effect of freeze-thaw cycles on the flexural strength of Greek natural stones**
Konstantinos N Laskaridis, Angeliki Arapakou
- P1-03** **Structural and electrochemical characterization of Natural Manganese Oxides from Drama Mn-oxide Deposits of Greece**
George Soulamidis, Christina Stouraiti, Harilaos Tsikos, Maria Kourmousi, Eleni Charalampous, Christiana Mitsopoulou
- P1-04** **Mineralogical and geochemical constrains of the critical and rare metals in the vein-type mineralization at the Vertiskos unit, northern Greece**
Christos Stergiou, Grigorios Aarne Sakellaris, Vasilios Melfos, Panagiotis Voudouris
- P1-05** **Sustainable blue economy as a supplier of Strategic and Critical Raw Materials**
Fani Sakellariadou, Francisco Javier Gonzalez, James Hein, Blanca Rincón-Tomás, Nikolaos Arvanitidis, Thomas Kuhn
- P1-06** **The suitability of mafic volcanics from the island of Patmos for acidic water purification applications: Report on initial experimental results**
Efi Kosti, Natalia Aggelopoulou, Petros Koutsovitis, Christina Lazaratou, Alkiviadis Sideridis, Petros Petrounias, Dimitrios Papoulis
- P1-07** **The Hydrogeological Conditions as a Crucial Factor for Creating Pit Lakes. The Case of Kyparissia Mine in Megalopolis, Greece.**
Georgios Louloudis, Christos Roumpos, Eleni Mertiri, Georgios Kasfikis, Eleni Vasileiou
- P1-08** **Assessment of hand-held XRF analyser performance for the characterization of aluminium scrap**
Michail Galetakis, Angeliki Ntourntourea, Basileios Deligiorgis
- P1-09** **Magmatic controls on Zr-Ti-U-Th-REE enrichment in potassic mafic-intermediate rocks and evaluation of their economic significance**
Charalampos Vasilatos, Angeliki Papoutsas
- P1-10** **Application of magnetic geophysical survey for the identification of buried bauxite deposits in Fokis, Central Greece.**
Panagiotis Zachariadis, Armand Dubus, Emmanuel Pizzo
- P1-11** **Application of MCDM methods in mineral processing – a review**
Zoran Štirbanović, Dragiša Stanujkić, Jovica Sokolovic, Ivana Ilić
- P1-12** **Mineral characterization of Ni-Co sulphide ores and tailings from Kevitsa Mine, Finland**
Nivea Magalhaes, Hannah Hughes, Jens Andersen, Richard Crane, Fernando Prado Araújo, Philippe Muchez

- P1-13** Mapping the soil chemical properties of the Sarigkiol Basin, Western Macedonia, Greece, in the view of the transition to the post-lignite era
Despoina Psarraki, Panagiotis Papazotos, Eleni Vasileiou, Maria Perraki
- P1-14** The Controlled-source Audio-frequency Magnetotellurics (CSAMT/AMT) method tested in the search for deep Fe-Skarn mineralization at Kimmeria, Xanthi, N. Greece
Petros Karmis, Magdalini Angeli, Dimitrios Tsouvalas, Constantinos Mavrogonatos, Michalis Fitros, Marianthi Anastasatou, Adamantia Chatziapostolou, Konstantinos Laskaridis
- P1-15** Recycling concrete to aggregates. Implications on CO₂ footprint
Ioannis Bampanis, Charalampos Vasilatos
- P1-16** Circular Economy for Critical Raw Materials in India
Anjali Singh
- P1-17** Investigating the recovery of noble metals from single-use medical technology specific waste streams
Kokkinos Evgenios, Merachtsaki Domna, Lampou Angeliki, Prochaska Charikleia, Peleka Efrosyni, Konstantinos Simeonidis, George Vourlias, Zouboulis Anastasios
- P1-18** Granulometric, chemical, and mineralogical evaluation of Greek lignite bottom ash for potential utilization in the concrete manufacturing
Argyro Asvesta, Ioannis Kapageridis, Agapi Vasileiadou, Kyros Koios, Nikolaos Kantiranis
- P1-19** A comparative study on the properties of volcanic rocks from Aegean islands, Greece, for utilization as pozzolanic additives in cement
Theodoros Sainis, Glikeria Kakali, Panagiotis Pomonis, Charalampos Vasilatos
- P1-20** Hydrometallurgical pilot plant reconfiguration for the recycling of automotive waste for the recovery of precious and critical metals: H2020 Treasure project
Pietro Romano, Nicolò Maria Ippolito, Marco Passadoro, Valentina Innocenzi, Hossein Shalchian, Giorgio Pellei, Ionela Poenita Birloaga, Francesco Ferella, Francesco Vegliò
- P1-21** SEMACRET-Geophysical exploration of magmatic ore deposits
Isla Fernández, Andrea Viezzoli, Elena Kozlovskaya, Shenghong Yang, Vojtěch Wertich, Ana Patricia Jesus, Olga Rosowiecka

POSTER SESSION 2

Mining, Energy Environment and Sustainability, Hydrometallurgical Processes

Tuesday 29 August 2023

📍 ROOM 16

- P2-01** Geochemical and limnological characterization of the Corta Atalaya pit lake (Riotinto mines, Spain)
Esther Santofimia, Blanca Rincón-Tomás, Enrique López-Pamo, Francisco Javier Gonzalez, Ricardo Amils
- P2-02** Preliminary Environmental Assessment of Carbonated Slags as a CCUS in Agricultural Applications
Ponnapat Watjanatepin, Laura Steinwider, Anthony de Schutter, Giuseppe Granata, Sara Vicca, Tom Van Gerven, Karel Van Acker
- P2-03** Evolution of alluvial gold mining technologies
Spyridon Mathioudakis, George Xiroudakis, Evangelos Petrakis, Emmanouil Manoutsoglou

1st Draft Detailed Program

- P2-04 Capacity of Nerium oleander to phytoremediate mining spoils assisted by air nanobubbles and biochar**
Petroula Seridou, Vasiliki Karmali, Evdokia Syranidou, Anna Kritikaki, Kostas Komnitsas, Georgios Kolliopoulos, [Nicolas Kalogerakis](#)
- P2-05 Extractive waste management in coal surface mining projects - A circular economy approach**
Ariadni Sokratidou, Christos Roumpos, Nikolaos Paraskevis, Aikaterini Servou, Francis Pavloudakis
- P2-06 Dynamic adsorption of Pb by Fe-Mg clay-quartz beds using micro-columns**
Zacharenia Kypritidou, Maria-Anna Gatou, Ariadne Argyraki, Vasileios Zotiadis
- P2-07 Potential use of leaching gravel as a raw material to the preparation of geopolymeric material as an alternative to conventional cement materials**
Arturo Reyes Roman, Francisca Balarezo Olivares, Daniza Castillo, Francisco Arriagada, Miguel Maulen Tapia
- P2-08 Adsorption of oil from wastewater by anthracite coal**
Jovica Sokolovic
- P2-09 A Review about the methods and techniques for evaluating the waters and soils in mining regions.**
Ioanna Petropoulou, Maria-Sotiria Frousiou, Eleni Vasileiou
- P2-10 Groundwater monitoring system based on Arduino platform and IIoT platform**
Marcin Paterek
- P2-11 Face Mapping in Open Pit Mines-A new approach**
Agni Patra, Konstantinos Pilalidis, Francis Pavloudakis, Ioannis Kapageridis
- P2-12 Potential benefits from Carbon Capture Utilisation and methanol production in magnesite processing line**
Antonis Peppas, Doris Skenderas, Chrysa Politi, Dimitris Sparis
- P2-13 Potential application of RES and underground H₂ storage in abandoned mines**
Antonis Peppas, Sotiris Kottaridis, Chrysa Politi
- P2-14 Prediction of hydrate dissociation conditions in natural/acid/flue gas streams in the presence and absence of inhibitors**
Ismail Ismail, Vassilis Gaganis
- P2-15 Evaluation of an iron nanocomposite material for heavy metals removal under flow conditions**
Christiana Mystrioti, Nymphodora Papassiopi, Anthimos Xenidis
- P2-16 Manganese Recovery from Nickel and Cobalt Production Facility MHP Leach Waste**
Firat Tekmanlı, Bengi Yağmurlu, Hüseyin Eren Obuz
- P2-17 An innovative approach for the recovery of cobalt sulfate from battery leach solutions by anti solvent crystallization**
Luka Nils Mettke, Marius Müller, Bengi Yagmurlu
- P2-18 Raw materials and circular economy: bioelectrochemical copper removal and recovery from wastewater**
Hyusein Yemendzhiev, Valentin Nenov
- P2-19 Evaluation of thiosulphate for gold recovery from pressure oxidation residues**

Christiana Mystrioti, Konstantina Kousta, Nymphodora Papassiopi, Katerina Adam, Maria Taxiarchou, Ioannis Paspaliaris

P2-20 Hydrometallurgical recovery of EoL LFP batteries using oxalic acid as lixivient
Rafaella - Aikaterini Megaloudi, Nikos Konsolas, Paschalis Oustadakis, Anthimos Xenidis

P2-21 Leaching of Bauxite Residues from Turkish, Greek and Romanian Plants Using Concentrated Sulphuric and Hydrochloric Acids for Potential Application in an Industrial Recovery Plant
Murat Kabataş, Tuğba Selcen Atalay Kalsen, Hakan Burak Karadağ, Yasin Ramazan Eker, Bayram Ünal, Panagiotis Angelopoulos, Paschalis Oustadakis, Ioannis Paspaliaris, Meral Baygül, Gökhan Demir, Sedat Arslan, Panagiotis Davris, Efthymios Balomenos, Gheorghe Dobra, Alina Boiangiu

P2-22 Unlocking the potential of intermediate type C2 laterites through nitrate leaching: Investigating leaching behavior for efficient metal recovery
Ioannis Varsamos, Paschalis Oustadakis, Rafaella - Aikaterini Megaloudi, Anthimos Xenidis

P2-23 Acid Leaching of Cu/Fe polymetallic alloy: Process alternatives & Challenges
Michail Vafeias, Amalia Bempelou, Dimitrios Panias

P2-24 Alluvial gold mining from Argonauts to Agricola
Spyridon Mathioudakis, George Xiroudakis, Evangelos Petrakis, Emmanouil Manoutsoglou

POSTER SESSION 3

Industrial Minerals, Reuse and Valorization, Advances in Metallurgy, Education

Wednesday 30 August 2023

ROOM 16

P3-01 RIS Internship – sustainable and structured internship programme for RawMaterials master students and organization from RIS regions
Sibila Borojević Šošarić, Kristina Koret, Vječislav Bohanek, Ferenc Madai

P3-02 Thermal treatment of serpentinized olivine wastes, obtained from chromite mineral enrichment operations, as an example of circular economy in the mining sector
Evgenios Kokkinos, Peleka Efrosyni, Zouboulis Anastasios

P3-03 Recovery of Critical Raw Materials from abandoned mine waste, some potential case studies in North-Western Italy
Gabriele Baldassarre, Adriano Fiorucci Paola Marini

P3-04 Electric Arc Furnace Dust vitrification via soda-lime recycled glass
Andronikos Maris, Dimitra Ioannidou, Ilias Sammas, Stavros Deligiannis, Petros Tsakiridis

P3-05 Using natural and synthetic zeolites for polluted soils clean-up
Charalampos Vasilatos, Maria Roulia

P3-06 Optimization of the demolition waste incorporation to cement mortar by response surface methodology
Ikbel Bejaoui, Halim Hammi, Khaoula Mkadmini, Rym Abidi

P3-07 Recovery of stainless steel from end-of-use dishwashers
Eirini Evangelou, Georgios Anastassakis, Spyridon Karamoutsos, Athanasios Stergiou

P3-08 ARTeMIS – A European training-through-research program for exploration geologists
Alexandre Tarantola, Jean Cauzid, Marie-Camille Caumon, Cécile Fabre, Rasool Mehdizadeh,

1st Draft Detailed Program

Panagiotis Voudouris, Christina Stouraiti, Konstantinos Soukis, Constantinos Mavrogonatos, Karsten Haase, Manuel Keith, Vasilios Melfos, Alexandros Chatzipetros, Grigorios-Aarne Sakellaris, Janja Mihajlovic, Tim Baker, Olivier Dossmann, Cedric Gavier

- P3-09 Utilization of an industrial waste for the development of fire resistant geopolymers**
Konstantinos Sakkas, Christos Georgopoulos, Yiannis Makrigiannis, Efthymios Balomenos, Panagiotis Davris
- P3-10 Empowering Students for the Future: Enhancing Soft Skills through non-formal educational paths**
Vasileios Loukadakis, Doris Skenderas, Nicolas Antoniadis, Eva Stachouli, Magdalini Mylona
- P3-11 Preliminary study of low cost raw materials for new syntheses of geopolymers targeting environmental applications.**
Marina Christopoulou, Paraskevi Lampropoulou, Petros Petrounias, Aikaterini Rogkala, Panagiota Giannakopoulou, Petros Koutsovitis, Dionisios Panagiotaras, Nikolaos Koukouzas
- P3-12 Sustainable Valorization of Quarry Waste from Granite Ornamental Rocks for Extracting Critical Raw Materials**
Antonello Aquilano, Valeria Indelicato, Elena Marrocchino, Rosalda Punturo, Carmela Vaccaro
- P3-13 Techno-environmental assessment of novel pathways of red mud waste use to improve extraction efficiency of valuable metals**
Monika Vitvarova, David Novacek, Shareq Nazir, Frederico Marques Penha, Onuralp Yucel, Pedro Cabral De Souza, Efthymios Kantarelis, Filiz Sahin, Kağan Benzeşik, Adela Svobodova, Rafael Rodriguez Trias, Arif Karaca, İlayda Ozbag, Ahmet Turan, Sergei Preis, Selçuk Kan, Camila Barreneche Guerisoli, Umay Çınarlı
- P3-14 Environmental Footprints of Bauxite alternatives for Alumina production - regional characteristics in Central Europe and Turkey,**
Monika Vitvarova, Kamila Milnerova, David Novacek, Ahmet Turan, Selcuk Kan, Frantisek Pticen, Stanislav Kapr, Dita Cerna, Umay Çınarlı, Camila Barreneche Guerisoli, İlayda Özbağ, Onuralp Yucel, Kagan Benzesik, Hasan Guney, Filiz Sahin, Arif Karaca, Adela Svobodova
- P3-15 Re-use of historical thermal plant ash deposits as supplementary cementing materials**
Bogdan Vasile, Adrian Nicoara, Arian Surdu, Ovidiu Oprea, Roxana Trusca, Mehmet Gulgun, Zeynep Başaran Bundur, Saso Sturm, Sorour Parapari, Otilia Vasile, Mirijam Vrabec
- P3-16 BR valorization with enhanced Al extraction by hydrothermal conversion of hematite to magnetite**
Paschalis Oustadakis, Panagiotis Angelopoulos, Maria Georgiou, Georgios Anastasakis, Ioannis Paspaliaris, Michael Pissas
- P3-17 Limonitic laterite reduction with hydrogen**
Evangelos Palavos, Michail Samouhos, Georgios Pillatos, Antonis Peppas, Anthimos Xenidis