

EDI*

Mining and Post-mining innovative solutions for mining waste, and risk assessment for sustainable development

Co-organized by NH10

Convener: Feven Desta [ECS](#) [Q](#)

Co-conveners: AL HEIB Marwan [Q](#), Emmanouil Varouchakis [Q](#), Adriana Guatame-Garcia [ECS](#) [Q](#), Sara Kasmaee [ECS](#) [Q](#), Hernan Flores [Q](#), Nasser Madani [Q](#)

► [Orals](#) | Thu, 18 Apr, 16:15–18:00 (CEST) Room -2.16

► [Posters on site](#) | Attendance Thu, 18 Apr, 10:45–12:30 (CEST) | Display Thu, 18 Apr, 08:30–12:30 Hall X4

Session description

Orals: Thu, 18 Apr | Room -2.16

Chairpersons: Feven Desta, AL HEIB Marwan

16:15–16:20

5-minute convener introduction

16:20–16:30 | EGU24-8964 | On-site presentation

[Delineation of mine tailings by ambient noise horizontal-to-vertical spectral ratio method](#) ►

Ayşe Kaslılar, Zbigniew Wilczynski, Christopher Juhlin, and Mehrdad Bastani

16:30–16:40 | EGU24-14563 | On-site presentation

[Reimagining Australia's mine waste: New resources, new challenges](#) ►

Anita Parbhakar-Fox, Laura Jackson, Kamini Bhowany, Rosie Blannin, Allan Gomes, and LeXi K'ng

16:40–16:50 | EGU24-12537 | [ECS](#) | On-site presentation

[Electrochemical conversion of sulfide mineral-containing mine waste for energy and resource recovery using fuel cell technology](#) ►

Won Jung Ju and Kyoungphile Nam

16:50–17:00 | EGU24-17054 | On-site presentation

[Exploration and reevaluation of a tailing storage facility from a high-sulfidation epithermal gold deposit](#) ►

Petya Gutzmer, Kai Bachmann, Raimon Tolosana-Delgado, Laura Tusa, Cecilia Contreras, Philipp Büttner, and Jens Gutzmer

17:00–17:10 | EGU24-5800 | On-site presentation

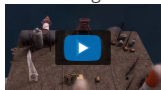
[Macro- to nanoscale mineral relationships in mining wastes of the As-Sb-Tl-Au Allchar mine, North Macedonia](#) ►

Tamara Đorđević, Michael Stöger-Pollach, Sabine Schwarz, Goran Tasev, Todor Serafimovski, Ivan Boev, and Blažo Boev

17:10–17:20 | EGU24-2202 | [Highlight](#) | On-site presentation | [📺](#)

[Repurposing former underground coal mines by deploying emerging renewable energy and circular economy technologies](#) ►

Pedro Riesgo Fernández, Alicja Krzemień, Gregorio Fidalgo Valverde, Antonio Luis Marqués Sierra, and Francisco Javier Iglesias Rodríguez



17:20–17:30 | EGU24-3065 | [Highlight](#) | On-site presentation

[A GIS-Based Decision Support System for Multi-Hazard Assessment in Post-Mining Regions](#) ►

Moncef Bouaziz, Benjamin Haske, Marwan Al Heib, and Joerg Benndorf

17:30–17:40 | EGU24-7632 | [ECS](#) | [Highlight](#) | On-site presentation

[Environmental monitoring of pollution at legacy mines in Greenland using portable X-ray Fluorescence Spectrometry \(pXRF\)](#) ►

Christian Frigaard Rasmussen, Christian Juncher Jørgensen, Jens Søndergaard, and Anders Mosbech

17:40–17:50 | EGU24-20831 | Virtual presentation

[Post-mining earthquakes and changes in observed vertical ground displacements during the period of mine flooding](#) ►

Violetta Sokoła-Szewiła, Zbigniew Siejka, and Patrycja Jarczyk

17:50–18:00 | EGU24-17569 | On-site presentation

[Certification systems for the ecological rehabilitation of mined areas](#) ►

Michail Galetakis, Emmanouil Varouchakis, Christos Roumpos, and Georgios Louloudis

Posters on site: Thu, 18 Apr, 10:45–12:30 | Hall X4

Display time: Thu, 18 Apr 08:30–Thu, 18 Apr 12:30

Chairpersons: AL HEIB Marwan, Hernan Flores

X4.191 | EGU24-5645

[Sensor-based Multi-Level Analysis of Ferronickel Furnace Slag: Exploring Economic Opportunities](#) ►

Feven Desta, Oscar Kamps, and Mike Buxton

X4.192 | EGU24-19060 | [ECS](#)

[The bioleaching of metals from organic-rich black shale by Pseudomonas fluorescens](#) ▶

Mateusz Wolszczak, Anna Potysz, and Grzegorz Lis

X4.193 | EGU24-20090 | [ECS](#) | 

[Towards migration of fines within a soil matrix](#) ▶

Shane Aulestia, Jasmina Toromanovic, and Jan Laue

X4.194 | EGU24-17315

[A Web-Based Tool for Assessing Sustainability in Secondary Raw Material Recovery Projects Using the UNFC Framework](#) ▶

Soraya Heuss-Aßbichler, Laddu Bhagya Jayasinghe, Alireza Sobouti, Iman Dorri, and Juan Antonio Munizaga-Plaza

X4.195 | EGU24-8042 | [ECS](#)

[Origin of Rare Earth Elements in Acid Mine Drainage: Mineralogical Insights from the Iberian Pyrite Belt \(SW Spain\)](#) ▶

Rafael León Cortegano, Francisco Macías, Carlos R. Cánovas, Rafael Pérez-López, Ricardo Millán-Becerro, Jonatan Romero-Matos, Laura Sánchez-López, and José Miguel Nieto

X4.196 | EGU24-9303

[Recycle of quarry byproducts for producing a new Zn fertilizer](#) ▶

Giulio Galamini, Daniele Malferrari, Fabiana Altimari, Silvia Orlandi, and Luisa Barbieri

X4.197 | EGU24-7755 | [ECS](#)

A sustainable integration of mining activity and geo-tourism: a case study in Northern Italy. *(withdrawn after no-show)*

Marco Casale, Francesca Gambino, Alessandro Borghi, Riccardo Beltramo, Enrica Vesce, Cristina Vari, Marco Giardino, and Giovanna Antonella Dino

X4.198 | EGU24-3665 | [ECS](#)

Management of rockburst risks in deep underground engineering through controlled contour blasting *(withdrawn)*

Ang Lu, Peng Yan, Wenbo Lu, Xiaofeng Li, and Yuan Cao

X4.199 | EGU24-10941

[Cost – Benefit Analysis through Stochastic Risk Assessment on Mining Waste Management](#) ▶

Evangelos Machairas, Emmanouil Varouchakis, and Michail Galetakis

X4.200 | EGU24-3957 | [ECS](#)

[Comprehensive analysis and risk assessment of tailings storage facilities in China](#) ▶

Chenxu Su, Nahyan M. Rana, Stephen G. Evans, Bijiao Wang, and Shuai Zhang

X4.201 | EGU24-11299 | [ECS](#)

[Developing PRIME Technology for Enhanced Coal Tip Assessment: Innovations in Continuous Goelectrical Monitoring and Landslide Decision Support](#) ▶

Yin Jeh Ngui, Adrian White, Harry Harrison, Judith Porter, James Boyd, Phil Meldrum, Paul Wilkinson, Oliver Kuras, Jonathan Chambers, and Sam Deeley

X4.202 | EGU24-14982 | [Highlight](#)

[Analysis of ground movements in the post-mining area of the lignite mine “Babina” \(W Poland\)](#) ▶

Natalia Walerysiak, Jan Blachowski, Jarosław Wajs, and Paulina Kujawa

X4.203 | EGU24-17319

[Converting mine shaft into compressed air energy storage – shafts screening and assessment](#) ▶

Marcin Lutyński and Konrad Kołodziej

X4.204 | EGU24-15004 | [ECS](#)

[Flash Water Detection in Mining Areas Using Satellite Imagery and Meteorological Data](#) ▶

Aleksandra Kaczmarek

X4.205 | EGU24-19879

[Erosion rates estimates on a post-mining site](#) ▶

Thomas Grangeon, Tur Raphaël, Louis De Lary de Latour, Florian Masson, and Cerdan Olivier