

Communication and dissemination activities in H2GEO project

Progress Meeting in Ostrava

On May 15, 2025, another Progress Meeting was held as part of the H2GEO project, organized by the Czech partner – VSB in Ostrava.

During the meeting, the progress of the work and the next planned activities were discussed. Currently, intensive work is underway, including the design of a new mobile system for the separation of mining waste, research on the gasification of the carbon fraction, and scientific studies on the use of the mineral fraction.



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As part of the meeting, participants had the opportunity to learn about the capabilities of the ENET Research Centre, which is part of CEET. The centre conducts work on the conversion of feedstock materials – particularly waste and alternative fuels—into useful forms of energy, as well as research into their efficient utilization.



Within the H2GEO project, partners from VSB are also working on the potential for plasma gasification of the carbon-rich fraction recovered from mining waste.



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H2GEO project has received funding from the Research Fund for Coal and Steel (RFCS) under GRANT AGREEMENT No. 101112386. Project co-funded by the Polish Ministry of Science and Higher Education under the program entitled „Co-financed International Projects”, agreement no. 5676/FBWIS/2023/2024/2.

XXV Mineral Aggregates Conference

During the 25th Mineral Aggregates conference, which took place on April 23–25, 2025, in Kudowa-Zdrój (Poland), a special session was held dedicated to the H2GEO project.



During the session titled "Innovative Technologies for the Extraction and Use of Raw Materials from Anthropogenic Deposits," four papers were presented.

From ITG KOMAG, the following presentations were delivered:

- "Study of the Impact of Selected Process Parameters on the Efficiency of Density-Based Separation of Materials from Anthropogenic Deposits" (D. Kowol, P. Matusiak, R. Baron, P. Friebe), and
- "A New Device Solution for Effective Landfill Reclamation – Result of the H2GEO Project" (R. Baron, P. Matusiak, D. Kowol).



The Central Mining Institute – National Research Institute presented the paper "Application of Mineral Fractions in Construction and Road Materials, Environmental Engineering, and Mining" (J. Całus-Moszek, A. Klupa, M. Cempa, J. Korol, H. Świnder, K. Wierzchowski).

The Silesian University of Technology delivered a presentation titled "Assessment of the Potential of Secondary Sources in Selected EU Countries to Meet Raw Material Demand" (A. Nowak-Szpak, R. Król).



14-th Świętokrzyskie Mineral Processing Meeting

During the 15th Świętokrzyskie Mineral Processing Meetings, held on June 5–6, 2025, the presentation titled "From Waste to Resource – The Concept of Reclaiming Mining Waste Landfills under the H2GEO Project for a Circular Economy" (Od odpadu do zasobu – koncepcja rekultywacji składowisk odpadów górniczych w ramach projektu H2GEO na rzecz gospodarki o obiegu zamkniętym) was delivered. The presentation, prepared by ITG KOMAG, showcased the results of laboratory tests on jig separation and a new prototype solution for the industrial separation of waste.

Recent articles from the H2GEO project

- The article "Performance Evaluation of Pressure Swing Adsorption for Hydrogen Separation from Syngas and Water–Gas Shift Syngas" by A. Krótki, J. Bigda, T. Spietz, K. Ignasiak, P. Matusiak, and D. Kowol, was published in Energies journal. (Energies 2025, 18, 1887)
- The next article "H2GEO – Innovative Processing Technologies and Directions for the Utilization of Post-Mining Waste" by P. Matusiak, D. Kowol, and R. Baron was published in the journal Mineral Aggregates (vol. 8, Publishing House of Wrocław University of Science and Technology, Wrocław, 2025).



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