

Special Issue

Just Transition in Mining: Methane Mitigation, Energy Recovery, and Smart Ventilation Systems

Message from the Guest Editors

This Special Issue aims to provide a multidisciplinary platform for the latest research, technologies, and methodologies supporting the green transformation of mining operations. We particularly welcome contributions that address emission control, with a focus on methane reduction from operational or abandoned coal mines, innovative ventilation strategies, and the integration of digital twin models in mine environmental management. Both experimental and theoretical papers are encouraged, including numerical simulations, field case studies, and methodological reviews. Topics of interest include smart ventilation systems, predictive modeling, methane-to-energy conversion technologies, and automation for enhancing operational safety and sustainability. We look forward to receiving your high-quality submissions that support the goals of decarbonization, digitalization, and a just transition in the extractive industries.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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