Special Issue

Advanced Processes in Mining Safety and Disaster Prevention: From Gas Extraction to Fire/Dust Control

Message from the Guest Editors

This Special Issue, “Advanced Processes in Mining Safety and Disaster Prevention: From Gas Extraction to Fire/Dust Control” will showcase cutting-edge research—either leveraging numerical tools for system analysis or developing novel models/methods tailored to field-specific challenges. Topics include but are not limited to:

- Prevention and control of dynamic disasters in mines;
- Development of numerical models for gas migration and seepage in coal seam pore-fracture structures, including characterization of micro-macro pore-fracture properties and their impact on gas/liquid transport mechanisms;
- Numerical simulation of deep coalbed methane extraction processes, including optimization of extraction parameters and prediction of production efficiency;
- Numerical analysis of coal mine gas disaster prevention and control technologies, such as gas drainage, gas outburst prediction, and gas explosion simulation;
- Modeling and simulation of permeability enhancement technologies for low-permeability coal seams, including hydraulic fracturing (process, fracturing fluid, proppant, temporary plugging agent), with focus on fracture propagation and permeability evolution;
- .....

Guest Editors

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Deadline for manuscript submissions

30 April 2026

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/251426

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Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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