

Special Issue on Rock Mechanics in Energy Resources Exploitation

CALL FOR PAPERS

Energy resources, which include coal, oil, and gas, are the foundation of industrial and agricultural development. The world's most widely used energy resources are distributed underground and the exploitation is closely related to properties of rock mass. The interactions of energy resources and rock mass play vital roles in the evolution of displacement field, stress field, and seepage field, which will further affect the methods and technologies of energy resources exploitation. For example, the permeability will increase in zones near the mining face, where the coal methane is nonrecoverable before coal mining and then coal methane can be effectively exploited through reasonable borehole arrangement. In addition, almost all of the energy resources exploitation will lead to environmental damage, such as surface subsidence, groundwater pollution, atmospheric contamination, vegetation withering, and farmland waterlogging. These problems seriously affect human health and social development. Only by minimizing the extent of any possible damage to environment can social development be sustainable. All in all, the fundamental solutions to these problems lie in the profound understanding of the rock mechanics response in the exploitation.

We invite authors to submit novel research papers and review articles to advance the understanding of rock mechanics in energy resources exploitation.

Potential topics include but are not limited to the following:

- ▶ Mechanics properties of rock in the actual environment and the changes in the process of exploitation
- ▶ Fluid-rock coupling action as well as the deformation and collapse of pore structure
- ▶ Strata dislocation and ground subsidence caused energy resources exploitation
- ▶ Geostress testing techniques
- ▶ The evolution of geostress field and the formation and expansion law of fractures
- ▶ The characteristics of rock property and acoustic response in the actual exploitation environment
- ▶ Geophysical interpretation of the physical and mechanical properties of drilling holes
- ▶ Research of hydraulic fracturing mechanic in the energy resources exploitation
- ▶ Enhanced coalbed methane
- ▶ Numerical simulation methods of rock response to energy resources exploitation

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ace/rmer/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline

Friday, 31 August 2018

Publication Date

January 2019