

Special Issue

Coal Chemical Structure Evolution, Coal Molecule and Methane Adsorption

Message from the Guest Editors

Methane in coal reservoirs is mainly stored in the pores of the coal matrix in the adsorption state. The sorption capacity of various coals is investigated by means of physically experimental tests for pore characteristics (or combined with sorption models) and characterized analysis of macromolecular structures (and/or molecular sorption simulations). At the molecular level, further explorations are needed to more comprehensively understand the mechanisms controlling the methane adsorption properties of coal macromolecule structures with different degrees of evolution. Topics include but are not limited to:

- Differences and mechanisms of methane adsorption/desorption in coals for various coal ranks;
- Molecular simulation of methane adsorption behavior;
- The influence of coal chemical structure evolution on micro-nanopore structure;
- Molecular structure of coal controlling methane adsorption capacity;
- New methods, experiments, and theories for characterizing methane adsorption in coal.

Guest Editors

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Deadline for manuscript submissions

closed (10 January 2023)



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Editor-in-Chief

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