

Special Issue on
**Multiscale and Multiphysical Approaches
to Fluids Flow in Unconventional
Reservoirs**

WILEY



CALL FOR PAPERS

In recent years, unconventional oil and gas reservoirs have attracted great attentions due to their unique properties. Compared to conventional reservoirs, these unconventional systems have low permeability (including a large number of nanopores) and consist of inter-particle pore networks with very poor connectivity. The fractured system is comprised of a hierarchical network of nanopores, cracks and micro-fractures, which form multiscale fracture network-pore dual media. Its complex microstructures make it difficult to characterize the flow of oil and gas flow by traditional approaches. Therefore, new multiscale and multiphysical methods are being continuously developed to characterize low permeability and fractured reservoirs and to describe flow and transport mechanisms.

This Special Issue aims to present recent advances in various subjects addressing new multiscale and multiphysical approaches to fluids flow in porous media, especially for unconventional oil and gas systems. We invite investigators to contribute both original research articles and review articles that will explore as many aspects as possible in the modeling and characterization of low permeability and fractured reservoirs.

Potential topics include but are not limited to the following:

- ▶ Multiphase flow
- ▶ Multiscale and multiphysical modelling
- ▶ Fracture characterization and hydraulic fracturing
- ▶ Enrichment and migration mechanisms in nanopores
- ▶ Pore-scale modelling
- ▶ Scale and capillary effects
- ▶ Gas adsorption and desorption
- ▶ Interface and surface effects
- ▶ Petrophysical properties

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

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

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