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Emerging Advances in Modeling for Water Imbibition in Porous Media: A Multiscale Perspective

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Message from the Guest Editors

This Special Issue aims to highlight the recent advances on modeling for capillary-driven processes in porous media with a multiscale perspective on numerical and theoretical developments, along with applications to a diverse range of discipline.

Potential topics of interest mainly include, but are not limited to:

1. The sub-pore scale picture including surface forces, roughness and (spatial) wettability distribution
2. Novel (multi) pore-scale insights into the physics of capillarity – ranging from geometric state variable descriptions to a thermodynamic picture
3. Upscaling from small to large scales, including aspects of pore-to-Darcy scale, REV, heterogeneity scales
4. Novel modelling approaches including mathematical, numerical and multi-physics aspects
5. Deep learning
6. Applications

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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

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