Special Issue

Microscopic Seepage Characteristics of Water Flooding or EOR in Reservoir

Message from the Guest Editors

With this Special Issue, we would like to draw special attention to the fundamental pore-scale characteristics of porous media flow during water flooding or EOR by combining analytical, computational, and experimental tools with regard to conventional and unconventional crude oil reservoirs. Rapid technological advances in many disciplines have created new opportunities for understanding the fundamental physics which were not possible (or very costly) in the past. The development and increased availability of reliable high-resolution imaging devices, high-efficiency image processing algorithms, and the development of advanced pore-scale numerical modeling methods are but a few examples of microscopic seepage characteristics of waterflooding or EOR in various crude oil reservoirs that could be beneficial. This issue is open but not limited to contributions in the following focus areas:

- Pore-scale imaging and modeling
- Multiphase fluid flow
- Topological analysis of fluid distribution
- Water flooding
- Gas-based EOR techniques, e.g., CO2, N2, air, hydrocarbon gas, foam
- Liquid-based EOR techniques, eg., polymer, surfactant, low-salinity water, nanofluid.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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