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Analysis and Simulation of Multiphase Flow in Porous Media

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Message from the Guest Editor

Flow in porous media is an important topic in many industrial applications. In particular, in the petroleum industry, the efficient recovery of oil from reservoirs requires a deep understanding of multiphase flow.

An oil reservoir is a basin that can contain oil, water and other chemical species, each present in one or more physical phases. The presence of some of these constituents can also be a consequence of the techniques used to extract the oil from the reservoir.

The problem can be approached from a theoretical point of view, but modeling of such systems is prohibitive for its complexity, so it is frequently useful to resort to other approaches. Nevertheless, many theoretical simplified models have been proposed, and they can be useful in many situations.

The numerical approach can provide important information and can be very useful in concrete applications. A further improvement can be provided by simulations of multiphase flow systems.

The present volume would like to gather some of the more recent advances in multiphase flow of porous media, to provide the reader for a fresh overview of the topic.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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