Special Issue

Multiphase Flow and Contaminant Reactive Transport in Porous Media

Message from the Guest Editor

Similar to any other flow and transport processes in porous media, the length scales of physical and chemical processes vary largely from microscopic to macroscopic scales during the soil contamination, contaminant transport and remediation. These processes are ranging from mass transfer between the contaminant species and water, surfactant or chemical species diffusion/dispersion, partitioning of species, chemical reactions, mobilization of contaminant ganglia, etc. With the advent of multiscale flow and transport solvers and improved computational powers, the predictive capacity of simulation tools for flow and transport in porous media has increased. In this special issue, the impact of length scales on various physical and (bio)chemical processes, diffusive/dispersive mixing processes, and mixing-controlled reactions that are involved in reactive contaminant transport is considered. Interplay of phase condition (two-phase or three-phase) and subsurface heterogeneity are also considered.

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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.

Editor-in-Chief

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