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Multiphase Flow and Contaminant Reactive Transport in Porous Media

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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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Special Issue



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Message from the Editor-in-Chief

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