

## Special Issue

# Fundamentals of CO<sub>2</sub> Storage in Geological Formations

### Message from the Guest Editors

Geological storage of CO<sub>2</sub> is widely considered as a promising option to reduce the CO<sub>2</sub> emissions released into the atmosphere; thus, reducing the detrimental effects of greenhouse gases on global climate. Secure storage of CO<sub>2</sub> in geological formations can be achieved through thermo-hydro-mechanical-chemical (THMC) processes, such as solubility, residual, and mineral trapping that ultimately lead to permanent trapping of CO<sub>2</sub>. This Special Issue aims at collecting high quality papers addressing recent advances in fundamental aspects of miscible and immiscible CO<sub>2</sub> transport, trapping, dissolution and mineralization, modeling and quantification over the range of scales relevant to geological storage of CO<sub>2</sub>. We intend to focus on the interplay of trapping mechanisms (i.e., solubility, residual, mineral) and their quantification, coupling of THMC processes, upscaling of theoretical and experimental results from pore and core scales to field scale, and addressing the challenge of field-scale modeling considering heterogeneity and uncertainties associated with storage formations.

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### Deadline for manuscript submissions

closed (31 July 2018)



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