Special Issue

Geochemical and associated Changes with Gas-Water-Rock Reactions

Message from the Guest Editor

The overall goal of this Special Issue of *Geosciences* is to explore and evaluate how gas-water-rock reactions impact subsurface and emerging technologies. Geochemical gas-water-rock reactions can modify rock properties such as porosity and permeability, affect water chemistry or leakage to drinking water aquifers, or can cause reservoir scaling and loss of productivity. They may also lead to benefits such as resealing cap-rock through mineral precipitation, or enhancing gas shale permeability through calcite dissolution from fractures. This special issue aims to cover, without being limited to, the following areas:

- CO2 storage: CO2 rock reactivity, impure CO2 reactions including SO2, NOx, O2, changes in porosity and permeability, water chemistry, and geomechanical changes after reaction etc.
- Shale or coal stimulation: acid, CO2, or hydraulic stimulation of gas or oil shales or coals and reaction associated changes.
- Reservoir or wellbore scaling reactions including brine injection, EOR, EGR, and geothermal.
- Gas-water-rock or other reactions associated with energy storage including nuclear energy etc.

Guest Editor

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closed (15 October 2019)

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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherentset of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientificallybased political decisions.
We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

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