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Rock Salt for Underground Energy Storage: Multiscale and Multiphysics Behavior

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to highlight the state-of-the-art findings in thermo-hydro-mechanical-chemical (THMC) coupling behaviors of salt rocks from grain-scale to microscopic scale, and to address the critical issues in upscaling the microscopic behaviors from the grain scale to the macroscopic scale for engineering applications. Original theoretical research articles, review articles, and case studies are welcomed. Potential topics include but are not limited to the following:

- The experimental studies about the damage evolution of rock salt from nano/micro to macro scale;
- Finite element, finite difference, discrete element, and coupled numeric modeling approaches;
- Multiphysics and multiscale constitutive models of rock salt;
- Quantitative descriptions of microscopic topological structures;
- Case studies for energy and resource storage hosted by salt rocks, including successful applications and accidents.

Prof. Dr. Jie Chen

Dr. Guowen Xu

Guest Editors



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Special Issue



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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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