



Advances in Underground Thermal Energy Storage

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Message from the Guest Editors

Dear Colleagues,

There is a global drive towards a net-zero carbon economy, which could be achieved with the help of underground thermal energy storage. Heating and cooling have to be decarbonised, since they account for much of the energy spent globally.

The aim of this Special Issue is to present advances in underground thermal energy storage. This can include case studies, theoretical studies, studies that involve system design, modelling, control, implementation, monitoring or optimisation, as well as reviews. Please also note that studies are not limited to subsurface technologies only, and the implementation of charge sources and demand (i.e. through heat networks) is also of interest.

Topics of interest include, but are not limited to:

- Borehole thermal energy storage
- Aquifer thermal energy storage
- Pit and mine thermal energy storage
- Geothermal heating and cooling
- Thermal response tests
- Whole-system modelling
- Heat networks
- Surface analysis of demand and charge
- Waste heat recovery
- Energy efficiency
- System optimisation
- Economic analysis
- Technological advances





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Message from the Editor-in-Chief

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