

## Special Issue

# Advanced Study and Application of Geothermal Energy and the Underground Thermal Energy Storage

### Message from the Guest Editors

This Special Issue will present the latest "Advanced Study and Application of Geothermal Energy and Underground Thermal Energy Storage." We invite researchers to submit original research articles and comprehensive reviews that advance the scientific understanding and engineering applications of these systems. Potential topics include, but are not limited to, the following:

- **Advanced Geothermal Systems:** Enhanced Geothermal Systems (EGSs), Closed-Loop Geothermal Systems, and deep geothermal exploration;
- **Underground Thermal Energy Storage (UTES):** Novel designs and optimization for Aquifer Thermal Energy Storage (ATES), Borehole Thermal Energy Storage (BTES), and Pit Thermal Energy Storage (PTES);
- **Multi-field Coupling:** THMC coupling mechanisms in geothermal reservoirs and storage mediums;
- **System Integration:** Hybrid renewable energy systems coupling geothermal with solar, wind, or industrial waste heat;
- **Sustainability and Assessment:** Life Cycle Assessment (LCA), techno-economic analysis, and environmental impact assessments of geothermal and UTES projects;
- **Building Applications:** Integration of geothermal heat pumps in green buildings and district heating/cooling networks.

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### Guest Editors

Prof. Dr. Yuejin Zhou

Dr. Zhengzheng Cao

Dr. Yi Xue

Dr. Teng Teng

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### Deadline for manuscript submissions

31 December 2026



Sustainability

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# About the Journal

## Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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## Editor-in-Chief

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