Special Issue

Enhanced Geothermal Systems and Green Geo-Energy Storage

Message from the Guest Editors

Enhanced Geothermal Systems (EGSs) and green geo-energy storage—encompassing thermal, hydrogen, compressed air, and underground pumped storage hydropower (UPSH)—are pivotal for achieving sustainable energy resilience. EGSs unlock geothermal potential in low-permeability formations through engineered reservoirs, while geo-energy storage leverages geological formations for scalable, low-carbon energy buffering. Critically, the success of these technologies hinges on advancements in rock mechanics and geomechanics, which govern subsurface stability, fracture dynamics, and reservoir efficiency. This Special Issue explores the integration of EGSs and geo-energy storage, emphasizing rock/geomechanical innovations, hybrid system design, and sustainable deployment strategies to address energy intermittency and grid flexibility. We welcome contributions on cutting-edge developments including but not limited to the following:

- Enhanced Geothermal Systems
- Green Geo-Energy Storage
- Hybrid Systems
- Geomechanical Sustainability
- Policy and Economics

Guest Editors

Dr. Chongyuan Zhang

Prof. Dr. Quan Gan

Dr. Jiamin Wang

Deadline for manuscript submissions

5 September 2025

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/233989

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

mdpi.com/journal/energies

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/journal/energies

About the Journal

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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)

MDPI