

## Special Issue

# Recent Advances in Reservoir Simulation

### Message from the Guest Editor

This Special Issue seeks to contribute to disseminating recent developments in the field of reservoir simulation from a developer's perspective, with the aim of documenting a scientific vision of how a reservoir simulator is likely to look a decade from now. Particular attention will be focused on mathematical formulations and computational physics, advanced discretization, gridding, multiscale simulation, subsurface energy storage modeling, high-performance computing, AI/ML integration, and nonlinear solvers with applications to the broad geo-energy domain including hydrocarbon exploration and production, CO<sub>2</sub> sequestration, underground H<sub>2</sub> storage, and geothermal exploitation. I invite the leading groups in reservoir simulation to contribute to ensure that their perspective on current challenges, advancements, and future developments in reservoir simulation is reflected in this Special Issue. I look forward to your submissions!

---

### Guest Editor

Dr. Mohammed Al Kobaisi

Department of Petroleum Engineering, Khalifa University, Abu Dhabi 127788, United Arab Emirates

---

### Deadline for manuscript submissions

closed (28 February 2023)



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/122058](https://mdpi.com/si/122058)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto:energies@mdpi.com)

[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)





# Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/journal/  
energies](https://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)