

## Special Issue

# Advances in Petroleum Engineering: AI-Driven Drilling, Well-Placement and Reservoir Management Workflows

### Message from the Guest Editors

As the complexity of subsurface operations continues to increase, especially in emerging geo-energy sectors such as geothermal energy and CO<sub>2</sub> storage, there is a growing need for smarter and more efficient decision-making under uncertainty. Artificial Intelligence (AI) is playing a key role in this shift by transforming traditional, resource-intensive workflows into fast, data-driven, and real-time tools for drilling automation, geosteering, and intelligent reservoir management. We invite you to contribute your latest findings to this Special Issue focused on AI-enhanced workflows and decision support systems in petroleum engineering. Topics of interest include machine learning for drilling and geosteering, AI-driven predictive reservoir modelling, uncertainty quantification, Digital Twins, and human–AI interaction. Submissions addressing cross-disciplinary insights from geothermal and CO<sub>2</sub> storage are also welcome. We aim to showcase innovative AI solutions that improve efficiency, reliability, and adaptability in complex energy projects.

---

### Guest Editors

Dr. Sergey Alyaev

NORCE Norwegian Research Centre, 5838 Bergen, Norway

Dr. Kristian Fossum

NORCE Norwegian Research Centre, 5838 Bergen, Norway

---

### Deadline for manuscript submissions

closed (28 February 2026)



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 8.3



[mdpi.com/si/238338](https://mdpi.com/si/238338)

*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 8.3



[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)