

## Special Issue

# Applications of Intelligent Models in the Petroleum Industry

### Message from the Guest Editors

Topics of interest include, but are not limited to, the following:

- Machine learning applications in reservoir characterization, such as permeability and porosity prediction, facies classification, and digital rock reconstruction;
- AI-driven production forecasting models for conventional and unconventional reservoirs, incorporating time-series analysis, deep learning architectures, and hybrid modeling approaches;
- Multimodal techniques that integrate tabular data, time-series, and images to enhance subsurface understanding and improve reservoir simulation models;
- Physics-informed machine learning approaches that couple domain knowledge with data-driven methodologies to enhance model interpretability and generalization;
- AI-powered real-time monitoring and predictive maintenance systems for drilling, wellbore stability, enhanced oil recovery (EOR), and equipment failure prediction;
- Addressing challenges such as data scarcity, quality assurance, and uncertainty quantification in intelligent model applications within the petroleum sector.

---

### Guest Editors

Dr. Hai Wang

Key Laboratory of Enhanced Oil & Gas Recovery, Ministry of Education, Northeast Petroleum University, Daqing 163318, China

Dr. Gang Hui

State Key Laboratory of Petroleum Resources and Engineering, China University of Petroleum (Beijing), Beijing 102249, China

---

### Deadline for manuscript submissions

30 April 2026



## Processes

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.5



[mdpi.com/si/232650](https://mdpi.com/si/232650)

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

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





# Processes

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.5



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



## About the Journal

### Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

---

### Editor-in-Chief

Prof. Dr. Giancarlo Cravotto  
Department of Drug Science and Technology, University of Turin, Via P.  
Giuria 9, 10125 Turin, 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, Inspec, AGRIS, and other databases.

#### Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))