

## Special Issue

# Advances in Hydraulic Fracturing Technology for Unconventional Reservoirs

### Message from the Guest Editors

Over the past two decades, the increased use of hydraulic fracturing technology has led to a significant increase in the production of shale oil and natural gas in many parts of the world. This increase in hydrocarbon production has resulted in a reduction in the use of coal for energy generation.

This Special Issue aims to present and disseminate the latest advancements in hydraulic fracturing technology for unconventional oil and gas reservoirs. Topics of interest for publication include, but are not limited to:

- New advances in analytical and numerical solutions to improve the accuracy of HF treatment designs.
- Well test analysis.
- Optimal re-frac operations.
- Fishbone drilling.
- Fracture-driven interaction.
- Machine learning & AI techniques for optimal freshwater use management and recycling the frac-fluid.
- Advanced research on characterizing flow back fluids for optimal treatment/disposal to reduce hazards and risks.

...

---

### Guest Editors

Dr. Hadi Jabbari

Department of Petroleum Engineering, University of North Dakota, Grand Forks, ND 58202, USA

Prof. Dr. Vamegh Rasouli

Petroleum Engineering, University of Wyoming, Laramie, WY 82071, USA

---

### Deadline for manuscript submissions

closed (30 June 2025)



## Processes

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.5



[mdpi.com/si/169823](https://mdpi.com/si/169823)

*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))