



## Recent Advances in Emulsion Transport in Porous Media

Guest Editors:

**Dr. Boxin Ding**

Department of Chemical and  
Petroleum Engineering,  
University of Calgary, Calgary, AB  
T2N 1N4, Canada

**Prof. Dr. Long Yu**

Department of Petroleum  
Engineering, China University of  
Geosciences (Wuhan), Wuhan,  
China

**Prof. Dr. Vladimir Alvarado**

Department of Chemical and  
Biomedical Engineering, College  
of Engineering and Physical  
Sciences, University of Wyoming,  
Laramie, WY 82071, USA

Deadline for manuscript  
submissions:

**closed (10 January 2023)**

### Message from the Guest Editors

Multiphase flow in porous media is constituted by the interplay of viscous and capillary forces. As a result of the capillary effect, colloidal dispersions, such as emulsions, foams, or suspensions, are generated, trapped, and transported in porous media. Among these colloidal dispersions, emulsions are very common in various industries, such as food, biology, energy, and sustainability. Recent advances in micro-CT, micro-MRI, and micromodels provide experimental platforms to gain insights into the pore-scale flow and diffusion of the droplets in porous media. The rapid development of the state-of-the-art pore-scale models, such as lattice Boltzmann, stochastic rotation dynamics, volume-of-fluid, level-set, phase-field, and pore-network models, has huge potential to simulate the transport of emulsion in porous media.

This Special Issue invites original research articles and review papers on recent advances in experimental, theoretical, and numerical works related to the convective and diffusive transport of emulsion in porous media, with applications to various industries, such as energy, the environment, biology, and sustainability.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Giancarlo Cravotto

Department of Drug Science and  
Technology, University of Turin,  
Via P. Giuria 9, 10125 Turin, Italy

## 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.

## 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:** JCR - Q2 (*Engineering, Chemical*) / CiteScore - Q2 (*Chemical Engineering (miscellaneous)*)

## Contact Us

---

Processes Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/processes](http://mdpi.com/journal/processes)  
[processes@mdpi.com](mailto:processes@mdpi.com)  
[X@Processes\\_MDPI](https://twitter.com/Processes_MDPI)