

Special Issue

Advances in Gas Hydrate Development: Phase Transition, Multiphase Flow and Heat-Mass Transfer

Message from the Guest Editors

To eliminate the global threat of energy shortage and climate change, considerable interest has been drawn on the exploitation of gas hydrate, due to its enormous energy reserves around the world. Many countries have devoted great efforts in gas hydrate-related research areas, and several field-scale production trials have been conducted in the USA, Canada, Japan, and China. Hydrate dissociation is a kinetics-controlled chemical reaction which is associated with various complex processes such as phase transition, heat-mass transfer, and multiphase fluid flow in porous media. The dissociation of hydrate particles will also cause the possibility of reservoir deformation due to the decrease in strength in porous media. Although considerable research has been conducted and substantial progress has been made in gas hydrate areas, knowledge gaps still remain with respect to these fundamental issues. The purpose of this Special Issue is to provide a comprehensive summary of the progress in the field of gas hydrate development. Other relevant topics with gas hydrate are also encouraged to be presented in this collection.

Guest Editors

Prof. Dr. Bo Li

School of Resources and Safety Engineering, Chongqing University, Chongqing 400044, China

Prof. Dr. Jing-Chun Feng

Institute of Environmental and Ecological Engineering, Guangdong University of Technology, Guangzhou 510006, China

Deadline for manuscript submissions

closed (15 October 2022)



Journal of Marine Science and Engineering

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.0



mdpi.com/si/98787

Journal of Marine Science and Engineering
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jmse@mdpi.com

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





Journal of Marine Science and Engineering

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.0



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



About the Journal

Message from the Editor-in-Chief

Journal of Marine Science and Engineering (JMSE, ISSN: 2077-1312) focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

Editor-in-Chief

Prof. Dr. Charitha Pattiaratchi

School of Engineering, The UWA Oceans Institute, The University of Western Australia, Perth, WA 6009, Australia

Author Benefits

High Visibility:

indexed with Scopus, SCIE (Web of Science), Ei Compendex, GeoRef, Inspec, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Marine) / CiteScore - Q2 (Ocean Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).