Special Issue

Towards Environmental Sustainability and Clean Energy: Multi-Scale Exploration of Gas Hydrate

Message from the Guest Editors

Natural gas hydrates are considered as a clean energy resource and can effectively mitigate environmental pollution while guaranteeing energy security. Although gas hydrate reserves are abundant and some achievements have been made in the pilot production of gas hydrate all over the world, but there are still many problems to be overcome and solved, and the mechanism problems need to be explored and analysed before the complete successful commercial exploitation. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following: The analysis of mechanism and influencing factors of the formation and decomposition of gas hydrate at molecular scale, the petrophysics properties response mechanism (resistivity, acoustic velocity, mechanics, permeability, and nuclear magnetic resonance) of gas hydrates at plunger scale, the methods of well logging identification and parameters calculation for gas hydrates, seismic identification of gas hydrate reservoirs and estimation of reserves, gas hydrate production technology and methods, geological hazards and risks caused by gas hydrate.

Guest Editors

Dr. Huaimin Dong

Dr. Weichao Yan

Dr. Naser Golsanami

Dr. Sha Song

Deadline for manuscript submissions

28 February 2026



Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



mdpi.com/si/209379

Sustainability
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sustainability@mdpi.com

mdpi.com/journal/ sustainability





Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



About the Journal

Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University, Columbus, OH 43210, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)

