

Special Issue

New Advances and Challenges in Hydrate-Petroleum System Geology Characterization and Production Technology

Message from the Guest Editors

Natural gas hydrate is a highly promising alternative energy source, known for its abundant resources, low carbon emissions, and environmental compatibility. However, the unique physical properties and accumulation environments of gas hydrate present challenges to achieving commercial standards in safe, efficient, and long-term hydrate production.

To effectively overcome these challenges, it is imperative to establish a comprehensive understanding of hydrate reservoirs and their relationship with conventional petroleum geology systems. This prerequisite, including geological identification and physical characterization of hydrate reservoirs, serves as the foundation for successful hydrate production.

The objective of this Special Issue is to gather the latest advancements in theory, experimentation, simulation, and field studies within these areas, and to expedite the exploration and development process of hydrate reserves, ultimately facilitating the transition towards a more sustainable energy future.

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Deadline for manuscript submissions

closed (20 December 2024)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/190213

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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