Special Issue

Exploring the Potential of Gas Hydrates: Exploration and Reservoir-Characterization Technologies

Message from the Guest Editors

Natural gas hydrates, as a clean and environmentally friendly energy source, are believed to hold vast global reserves and are considered to be a potential hydrocarbon resource. However, exploring the potential of gas hydrate reservoirs poses primary challenges due to the implicit physical properties of gas-hydrate-bearing sediments that result from the complex occurrence and concentration patterns of gas hydrates. Therefore, continuous advancements in sophisticated technologies tailored to gas hydrate reservoir characterization are imperative. Topics of interest for publication in this Special Issue include, but are not limited to, the following:

- All aspects of geophysical technologies for gas hydrate reservoir exploration;
- Data processing and inversion;
- Quantitative interpretation;
- Numerical and physical modeling;
- Rock property analysis;
- Petrophysical analysis and well-log interpretation;
- Laboratory measurements;
- Comprehensive characterization of gas hydrate reservoirs.

keywords: gas hydrate; porosity; saturation; gas hydrate-bearing sediments; free gas; rock physics; petrophysics; seismic and logging methods; gravity and magnetic methods...

Guest Editors

Prof. Dr. Zhiqi Guo

Prof. Dr. Feng Zhang

Dr. Pinbo Ding

Deadline for manuscript submissions

closed (20 June 2025)



Applied Sciences

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Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/203674

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

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Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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