

Special Issue

Numerical Modeling, Simulation, and Optimization of Gas Hydrate Kinetics and Thermodynamics

Message from the Guest Editor

This is inviting submissions to this Special Issue of *Energies* titled “Numerical Modeling, Simulation, and Optimization of Gas Hydrate Kinetics and Thermodynamics”. Numerical research into gas hydrate kinetics and thermodynamics is an invaluable supplement to experimental and field studies as it allows researchers to explore concepts that might not otherwise be accessible. Moreover, there is still much to discover about the thermodynamics and kinetics of semi-clathrates, which are closely related to gas hydrates. This Special Issue will deal with the numerical modeling, simulation, and optimization of gas hydrate kinetics and thermodynamics. Topics of interest include, but are not limited to, the following:

- Molecular dynamic studies of gas hydrate nucleation, growth, agglomeration, or dissociation;
- Simulation of gas production from underground deposits of natural gas hydrate;
- Flow assurance simulations;
- Geomechanical simulations;
- Computation of phase equilibria;
- Applications of numerical mathematics for interpreting experimental results.

I look forward to your contributions.

Guest Editor

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Deadline for manuscript submissions

closed (10 December 2025)



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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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