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.

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The *Journal of Marine Science and Engineering* (*JMSE*; ISSN 2077-1312) is an international peer-reviewed open access journal which provides an advanced forum for studies related to marine science and engineering. The journal aims to provide scholarly research on a range of topics, including ocean engineering, chemical oceanography, physical oceanography, marine biology and marine geosciences. We invite you to publish in our journal sharing your important research findings with the global ocean community.

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