



## Chemical-Assisted Steam Co-injection Process

Guest Editor:

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### Message from the Guest Editor

Dear Colleagues,

The main method to recover heavy oils and bitumen is an in situ steam-based method, e.g., steam-assisted gravity drainage (SAGD). However, some challenges, such as low sweep efficiency, high costs, and environmental issues, still hinder the further application of this technology. There exists a need for an improved method for recovering residual oils after performing steam injection. Chemicals, i.e., surfactant (including non-symmetrical molecules and others), polymer, nanofluid, and foaming agents, have promising potential to improve the performance of heavy oil recovery methods. This Special Issue focuses on the challenges associated with each of the abovementioned chemicals and steam-based recovery methods to provide the scientific evidence needed to determine whether the chemical assisted steam co-injection process is an immediate part of the solution, or whether further research is needed to improve this technology...





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## Editor-in-Chief

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## Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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