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Chemical and Gels for Oil Drilling and Enhanced Recovery

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

This Special Issue delves into the exploration of chemical compounds and gels in oil and gas fields, aiming to enhance drilling efficiency and improve oil recovery. We invite contributions covering a wide array of topics, including novel gel synthesis, mathematical modeling, the experimental evaluation of gel performance, and applications of chemical compounds as well as gels in drilling operations and oil recovery processes.

Gels, characterized by their elastomeric nature and three-dimensional network structure, comprising polymers, cross-linkers, and other additives, play pivotal roles across various domains of oil and gas drilling and production engineering. Their applications range from serving as drilling fluids to controlling lost circulation, facilitating fracturing, acidizing, conformance control, water shutoff, and enhancing oil recovery.

We eagerly anticipate the submission of fresh research endeavors in both chemical compounds and gels aimed at optimizing drilling operations and enhanced oil recovery.

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Message from the Editor-in-Chief

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

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