Special Issue

Recent Advances in Drilling Fluid Technologies

Message from the Guest Editors

Drilling fluid (mud) is an important type of fluid that must fulfill numerous important functions during drilling operations. Since some commercially available additives used for the optimization of drilling fluid constitute non-degradable and environmentally hazardous materials, in the last few years, research has aimed to apply a green approach and the concept of circular economy in mud design to determine whether different biodegradable waste materials can be used as efficient drilling fluid additives. Also, for drilling through unconventional reservoirs (e.g., shales), the industry is exploring the possibility of replacing existing conventional materials with those that can plug nanopores in rocks with very low permeability.

So we encourage scientific papers that present advances in drilling fluid optimization. All other types of fluids used during drilling, completion, and workover, as well as hydraulic fracturing, are acceptable. The preferred subjects include drilling fluid property optimization, testing, additives, cuttings removal, biodegradable materials, the use of waste, nanoparticles, formation damage, cement slurries, hydraulic fracturing fluids, and others.

Guest Editors

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Deadline for manuscript submissions

closed (20 March 2025)



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/197758

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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.

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