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Application of Nano-Technology for Oil Recovery

Guest Editor:

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Deadline for manuscript submissions:
closed (15 December 2019)

Message from the Guest Editor

Emerging nanotechnology with EOR techniques has shows demonstrated potential that has not yet been fully understood or fully explored. This is evident from the vast body of research over the past decade focusing on oil recovery aided by nanotechnology. Breakthroughs in this field have the potential to be a game changer, as nanoparticles (NPs) have the distinct advantages of small size, good mobility and a high specific surface area, which enables their effectiveness at significantly low weight concentrations. The use of NPs for oil recovery can be broadly classified into three categories: (1) nanofluids, or colloidal suspensions of NPs dispersed in a base fluid; (2) nano-emulsions, or the use of NPs to stabilize emulsion; (3) nano-based foams, or gas foams stabilized by NPs. In short, these methods have the potential to develop novel, low-impact, EOR methods for the future.

This Special Issue seeks high quality submissions geared towards advances in the application of nanotechnology for oil recovery. The Special Issue particularly seeks submissions that focus on shedding light on the underlying mechanisms that govern the added benefits of NPs in oil recovery processes.

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Editor-in-Chief

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call "nanomaterials". These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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