Special Issue

Application of Nanoparticles for Oil Recovery

Message from the Guest Editor

Due to their large surface-area-to-volume ratio and enhanced chemical reactivity, nanoparticles have attracted interest among researchers in the upstream petroleum industry for oil recovery applications. But the mechanisms for oil recovery are not fully understood. Studies on the use of surface-functionalized particles for special reservoir rock and fluid properties and reservoir conditions might be the way forward for understanding the mechanisms involved. Our improved ability to study multiphase flow in porous media on pore scale will also be important for the development of nanotechnology for oil recovery. This Special Issue welcomes the submission of original research papers and comprehensive reviews that demonstrate or summarize significant advances in the understanding of recovery mechanisms by using nanoparticles in oil recovery. Example topics include: pore scale analysis, mechanisms of recovery due to nanoparticles, adsorption and transport of nanoparticles, wettability alteration, interfacial tension reduction, modelling of nano-EOR processes, and nanoparticles together with other EOR agents.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2021)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/39103

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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