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Nanotechnology Applied to the Oil Productivity Improvement and Enhancement of Oil Recovery

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Message from the Guest Editors

Dear Colleagues,

The exponential growth of the world's population has led to a higher demand for fossil fuels to meet energy needs. In this regard, nanotechnology is becoming a key player in incorporating advances that lead to an increase in productivity and reserves of crude oil and gas. Recent applications under field conditions have proven that nanoparticles and nanofluids can inhibit/remediate different formation damage mechanisms, increase well productivity, and enhance the oil and gas recovery. Therefore, the main objective of this Special Issue is to provide the last advances and applications under an industrially relevant environment of nanotechnology-based solutions focused on productivity improvement and enhanced oil recovery (EOR) to face the current challenges of the oil and gas industry. Original research and review articles are welcome for this issue.

Topics that will be considered for this Special Issue include but are not limited to the following:

- EOR
- EGR (enhanced gas recovery)
- Formation damage
- IOR (improved oil recovery) and well productivity
- Unconventional resources
- Surface and/or Interface phenomena
- Microfluidic
- Nanofluids/nanoparticles



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Special Issue



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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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