

Special Issue

Polymers in Petroleum Engineering: Enhancing Performance and Sustainability

Message from the Guest Editors

Polymers play a crucial role in advancing petroleum engineering by improving drilling fluid performance, enhancing oil recovery, and enabling environmentally sustainable operations. This Special Issue aims to showcase the latest research on polymer-based innovations that optimize oilfield applications while addressing challenges such as high-temperature stability, salt tolerance, and eco-friendly formulations. We welcome contributions covering a broad spectrum of topics, including but not limited to the following:

- Polymer-modified drilling fluids for enhanced rheology and filtration control;
- Polymer-based fracturing fluids for improved proppant transport;
- Polymer-based plugging agents for wellbore stability and lost circulation control;
- Smart polymeric materials for enhanced oil recovery (EOR);
- Biopolymer-based solutions for sustainable petroleum operations;
- Advanced polymer coatings for corrosion and scale prevention;
- Deep learning and artificial intelligence in polymer design and performance prediction.

Guest Editors

Prof. Dr. Meichun Li

School of Petroleum Engineering, China University of Petroleum (East China), Qingdao 266580, China

Dr. Bo Liao

School of Petroleum Science, China University of Petroleum (East China), Qingdao 266580, China

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Polymers
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
polymers@mdpi.com

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Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.9.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker

Fraunhofer-Institut für Angewandte Polymerforschung, Lehrstuhl für
Polymermaterialien und Polymertechnologie, Universität Potsdam,
Geiselbergstraße 69, 14476 Potsdam-Golm, Germany

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