

Special Issue

Advances in CO₂ Utilization for Enhanced Oil Recovery

Message from the Guest Editors

The increasing global demand for energy together with growing environmental concerns has accelerated research and development in carbon capture, utilization and storage (CCUS) technologies for sustainable hydrocarbon recovery and carbon management. Among these technologies, CO₂-enhanced oil recovery (CO₂-EOR) has emerged as a promising approach that simultaneously improves oil recovery efficiency while enabling long-term geological storage of carbon dioxide. Recent advances in reservoir engineering, porous media characterization, nanotechnology, digital modeling, and experimental techniques have significantly expanded the understanding and application of CO₂ utilization in subsurface energy systems. This Special Issue aims to provide a comprehensive platform for researchers, engineers, and industry professionals to present recent developments, challenges, and future perspectives related to CO₂ utilization and enhanced oil recovery technologies.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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