Special Issue

Recent Advances in Gases Adsorption and Transport Behavior

Message from the Guest Editors

Many countries around the world aim to reach net zero carbon emissions in the next few decades and are focusing on initiatives in the energy sector to reduce carbon emissions. Further measures include: reducing methane emissions and investing in new energy sources, including hydrogen. In reality, environmentally friendly contributions could come from the separation of CO2 from industrial exhausts and the sequestration of CO2 in reservoirs which can be combined with the enhanced-oil-recovery methods and shale gas production. Furthermore, hydrogen storage devices are important for new energy sources such as fuel cells. In this Special Issue, we welcome experimental and theoretical/simulation studies to help develop environmentally friendly applications relevant to the mitigation of climate change. The areas of focus include, but are not limited to, CO2 separation from industrial exhausts using improved nanoporous materials/solvents such as ionic liquids, the environmental implications of surfactants/polymers/nanoparticles used in EOR, hydrogen storage in porous media such as modified carbon nanotubes and metal-organic frameworks, and membranes/clathrates for water desalination.

Guest Editors

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reservoir simulations; finite element methods; flash calculation; deep learning algorithms

Deadline for manuscript submissions

closed (31 May 2022)

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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