Special Issue

Applications of Computational Fluid Dynamics in Energy and Reaction Systems

Message from the Guest Editors

This Special Issue aims to provide comprehensive coverage of cutting-edge research on the application of Computational Fluid Dynamics (CFD) in energy engineering and chemical engineering. CFD is a powerful tool that is widely used to address challenges in energy systems, including renewable energy technologies, energy storage, and combustion processes, as well as in chemical engineering applications, such as reactor design, mixing phenomena, and multiphase flows. We welcome contributions that showcase advancements in both fundamental and applied CFD studies, including novel methodologies such as reactive flow simulations, turbulence modeling, and the integration of machine learning with CFD. Submissions featuring industrial case studies and experimental validation are particularly encouraged. This Special Issue aims to emphasize the transformative impact of CFD on improving energy efficiency, reducing emissions, and fostering the development of innovative technologies for a sustainable future.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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