Special Issue

Application of Artificial Intelligence (AI) in Traditional Energy and New Energy

Message from the Guest Editors

As the world undergoes a new round of technological revolution and industrial transformation, the energy industry is embracing the transition towards low-carbon, smart, and sustainable development. This shift is driving profound systemic changes in the economy and society at large. The transformation in energy field includes two key aspects: the "low-carbonization of traditional energy" and the "practical application of low-carbon new energy." In this context, machine learning (ML) has emerged as a transformative tool that can address these challenges by optimizing energy production, improving system efficiency, and advancing the development of new materials for energy conversion and storage. The integration of machine learning into energy systems promises to accelerate innovation in areas such as smart grids, energy storage, renewable energy technologies, and the design of energy-efficient materials. This Special Issue aims to explore the latest research on the application of machine learning in energy technologies, with a particular focus on both theoretical and experimental advancements.

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