Special Issue

Advances in Detection, Control and Optimization of Low-Carbon Energy Systems

Message from the Guest Editors

In the pursuit of sustainable energy solutions, the importance of developing low-carbon energy systems has risen. With the looming threat of climate change and the urgent need to mitigate its effects, the scientific community has united in advancing innovative approaches to detect, control, and optimize low-carbon energy systems. This Special Issue titled "Advances in Detection, Control and Optimization of Low-Carbon Energy Systems" seeks to explore recent breakthroughs in detecting, controlling, and optimizing low-carbon energy systems, discussing novel technologies, methodologies, and best practices. Topics encompass, but are not confined to, the following:

- Integration of renewable energy, energy storage, carbon capture and storage, etc., in industrial processes;
- Multi-criteria analysis of energy system, including thermodynamic, economic, thermoeconomic, and environmental assessments;
- Signal processing and big data analysis in a low-carbon energy system;
- Low-carbon combustion technology (e-fuels such as ammonia and hydrogen, the Allam cycle, etc.).

Guest Editors

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Editor-in-Chief

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