

## Special Issue

# Advanced Sustainable Fuels and Electrified Energy Systems: Technologies, Integration, and Techno-Economic Assessment

### Message from the Guest Editor

The transition toward climate-neutral energy systems requires coordinated advances in sustainable fuels, electrification technologies and integrated energy-system design. This Special Issue aims to provide a focused platform for high-quality research addressing technological, systemic and techno-economic challenges associated with sustainable fuels and electrified energy systems. The scope of the issue includes advanced sustainable fuels (hydrogen, e-fuels, biofuels), electrified power and propulsion systems, hybrid energy architectures and the integration of power generation, storage and end-use sectors. Particular emphasis is placed on system-level analyses, optimization methodologies, life-cycle and sustainability assessments and techno-economic evaluations that support informed decision-making. By connecting fundamental technological developments with applied system integration and sustainability metrics, this Special Issue seeks to complement existing literature and contribute to the quantitative assessment of sustainable energy pathways aligned with long-term decarbonization objectives.

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### Guest Editor

Prof. Dr. Javier Barba

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## Editor-in-Chief

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