

## Special Issue

# Advances in Microgrid Energy Management with Integrated Renewables and Power Electronics

### Message from the Guest Editor

This Special Issue aims to gather the most recent cutting-edge research on microgrid energy management, focusing on innovative methodologies, algorithms, and technologies. Topics of interest for publication include, but are not limited to, the following:

- Advanced control algorithms for energy management in high-renewable-penetration microgrids;
- Modern control techniques for load balancing and demand management in microgrids;
- Innovative methods for the optimal sizing and placement of distributed energy resources in microgrids;
- Novel power converter designs and their impacts on microgrid dynamics;
- Power converter modulation techniques for improving power quality;
- Innovative real-time control methodologies for enhancing microgrid stability, efficiency, and reliability;
- Advanced control methodologies for real-time monitoring, control, and optimization of energy storage systems;
- Case studies and real-world implementations of renewable-powered microgrids.

### Guest Editor

Dr. Alessia Cagnano

Dipartimento di Ingegneria dell'Informazione, delle Infrastrutture e dell'Energia Sostenibile (DIIES), Università degli Studi Mediterranea di Reggio Calabria, Reggio Calabria, Italy

### Deadline for manuscript submissions

30 November 2025



## Energies

an Open Access Journal  
by MDPI

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/212345](https://mdpi.com/si/212345)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto:energies@mdpi.com)

[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)





# Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)



## About the Journal

### Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

---

### Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University  
Niccolò Cusano, 00166 Roma, Italy

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

CiteScore - Q1 (Control and Optimization)