



*energies*



an Open Access Journal by MDPI

## Permanent Magnet Machines for Wave Energy Converters

Guest Editor:

**Dr. Nick Baker**

Electrical and Electronic  
Engineering, School of  
Engineering, Newcastle  
University, Newcastle upon Tyne  
NE1 7RU, UK

Deadline for manuscript  
submissions:

**closed (20 January 2022)**

### Message from the Guest Editor

Dear Colleagues,

In wave energy, efficiency plays an important role in the lifetime cost of energy—more than the capital cost of the generator. Low-speed, high-torque, and fixed-space constraints naturally lead the electrical machine designer towards rare earth permanent magnet (PM) topologies. However, there are numerous configurations. Selection of a specific topology is guided by such performance requirements as rated torque, torque ripple, power factor, efficiency, overload capacity, and mechanical constraints. In many configurations, the electrical drive is also responsible for wave energy control. This unusual application has led to the design, development, and demonstration of a range of novel electrical machines and drives at various scales.

This Special Issue aims to pull together recent developments in the area of permanent magnet electrical machines designed for use as the power take-off in wave energy converters. The scope of this Special Issue includes novel machine topologies, novel configurations, magnetic gears, electric drives, and design and integration issues.



[mdpi.com/si/58000](https://mdpi.com/si/58000)

# Special Issue



# *energies*



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Enrico Sciubba**

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

## 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.

## 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, CAPus / SciFinder, and other databases.

**Journal Rank:** CiteScore - Q1 (Control and Optimization)

## Contact Us

---

*Energies* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/energies](http://mdpi.com/journal/energies)  
[energies@mdpi.com](mailto:energies@mdpi.com)  
[X@energies\\_mdpi](https://twitter.com/energies_mdpi)