

## Special Issue

# Modeling and Analysis of Energy Harvesters

### Message from the Guest Editors

Vibrational energy harvesting was invented to provide a power supply to small monitoring devices from ambient vibrations. The development of this field was stimulated by increasing the demands for the powering of portable electronics, and extending the battery life. Proposed solutions consisted of a mechanical resonator and coupled transducers changing the mechanical energy into electrical power. In the last decade, energy harvesting has undergone spectacular changes through the application of nonlinear methods, in order to broaden the frequency input. Finally, new devices are not limited to the linear resonance frequency; they offer not only frequency range broadening via inclinations of the resonance curves, but also varieties of new nonlinear resonances for large enough inputs. This Issue will provide the modelling and analysis of nonlinear energy harvesting solutions, and feature their benefits by considering systems from a nano-scale to macro-scale.

---

### Guest Editors

Prof. Dr. Abdessattar Abdelkefi

Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, NM 88003, USA

Dr. Grzegorz Litak

Department of Automation, Lublin University of Technology, 20618 Lublin, Poland

---

### Deadline for manuscript submissions

closed (30 June 2020)



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/25571](https://mdpi.com/si/25571)

*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)