Special Issue

Vibration Power Harvesting and Its Applications

Message from the Guest Editors

With the increasing demand for sustainable and self-powered systems, vibration power harvesting has emerged as a promising solution for energy generation from ambient mechanical vibrations. This technology enables the development of self-sustaining electronic devices and sensors for a wide range of applications, from structural health monitoring to biomedical implants, wireless sensor networks, and industrial IoT. This Special Issue aims to present novel advancements, experimental results, and emerging trends in vibration power harvesting technologies. Areas relevant to vibration power harvesting and its applications include:

- Piezoelectric, electromagnetic, and triboelectric energy harvesting;
- Hybrid energy harvesting systems;
- Nonlinear and broadband vibration energy harvesting;
- MEMS-based micro-energy harvesters;
- Optimization and control of energy harvesting systems;
- Application-specific vibration harvesting for IoT, biomedical, and industrial sectors;
- Energy storage and power management for self-powered systems;
- Computational modelling and experimental validation of harvesters;
- Structural integration and smart material-based harvesters...

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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