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Special Issue on

Vibration energy harvesting: from micro to macro scale

CALL FOR PAPERS

Ambient vibrational energy is one kind of source that has received growing interests over the past decades in energy harvesting. With the development of science and technology, it is possible to replace the traditional batteries with efficient energy harvesting solutions for "battery-free" and "permanent lasting" electronics. Advanced micro and macro vibration energy harvesting technologies have great application prospects. Self-powered wireless sensor networks, micro-electronic devices, wearable devices and medical implantation devices are essential components in structural monitoring, environmental monitoring, in-vivo sensing, remote tracking and Internet of things. Besides the micro-scale applications, macro-scale energy harvesting from oceans is promising to generate comparable electricity as the hydroelectricity for solving the energy crisis. The efficient design of the micro and macro energy harvesting systems may require the understanding of the basic mechanics, mechatronics and electrodynamics of the scenario excitation, microelectromechanical system (MEMS) and macro vibration structures and the management circuits.

The proposed goal of this special issue is to present current state-of-the-art research in the fields of vibration energy harvesting systems including micro and macro systems, addressing the concerns from theoretical to experimental studies for high efficient vibration energy harvesting. We welcome relevant original research articles. Review articles summarizing the current state of understanding in the field of vibration energy harvesting are also welcome.

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