

# Special Issue

## Advances in Energy Harvesting, Metamaterials, and Their Integrated Multifunctional Systems

### Message from the Guest Editors

Vibration is one of the most ubiquitous energy sources in the ambient environment. Suppressing vibration is of great importance in enormous engineering applications. Due to the low-frequency band gap phenomenon, utilizing metamaterials for vibration suppression has attracted lots of research interests in the past two decades. On the other hand, another group of researchers is dedicated to harnessing and converting ambient vibration energy into electrical energy to power low-power consumption micro-electro-mechanical systems (MEMS). As metamaterials can be engineered with structural symmetry or asymmetry for wave manipulation, the extraordinary phenomena in metamaterials, such as negative refraction induced wave focusing, the defect state mode, and the topological interface mode, have great potentials to be employed for improving energy harvesting efficiency. Moreover, integrating energy harvesters into metamaterials naturally yields multifunctional systems that have both vibration suppression and energy harvesting abilities. For the above two reasons, some researchers attempted to develop metamaterial-based energy harvesters in recent years.

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### Guest Editors

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### Deadline for manuscript submissions

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## Symmetry

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### Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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### Editor-in-Chief

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