Special Issue

Metamaterials and Devices

Message from the Guest Editor

The purpose of this Special Issue is to highlight recent advances in mechanical metamaterials, engineered structural composites and material systems with dramatically enhanced mechanical properties, or properties nonexistent in natural materials. Examples include negative elastic moduli, negative compressibility, negative thermal expansion, reverse Saint-Venant effect, surface localization of vibration and deformation energy, acoustic and mechanical rectifiers and by-passers. This Special Issue covers all aspects of mechanical metamaterials research with an emphasis on understanding basic physical phenomena that determine metamaterials functionality, understanding the role of structural hierarchy, phase transitions maps, design approaches, novel manufacturing methods, and numerical modelling methods. Keywords

- mechanical metamaterial
- reverse elastic properties
- smart structure
- multistable structure
- structural composite

Guest Editor

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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