Special Issue

Advanced Mechanical Design and Applications of Metamaterials

Message from the Guest Editors

Metamaterials have introduced novel concepts and exciting functionalities that are beyond the traditional constraints imposed by natural materials, including negative refractive index media, microwave perfect absorber, invisibility cloaking, phase gradient metasurface, etc., some of which have already been realized and applied in practical applications. Nowadays, metamaterials have been employed at the interfacial and structural levels as well. Multi-physical properties like mechanical and dynamic responses have been considered in the design strategies of multifunctional metamaterials. For instance, sound attenuation, microwave absorber, and energy transduction require additional mechanical properties, such as being lightweight, load-bearing, as well as having environmental resistance. This Special Issue aims to highlight state-of-the-art theories, mechanisms, configurations, and fabrication techniques in this field.

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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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