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Advanced Mechanical Design and Applications of Metamaterials

Guest Editors:

Dr. Tao Wang

School of Integrated Circuits,
Huazhong University of Science
and Technology, Wuhan, China

Dr. Sichao Qu

Department of Mechanical
Engineering, University of Hong
Kong, Hong Kong

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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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Special Issue



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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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