# Special Issue

# Theory and Applications of Metamaterials

## Message from the Guest Editor

Metamaterials are human-made materials which exhibit specific electromagnetic properties and functions, which are not available in any known natural material. Such properties include a negative refractive index, large positive refractive index, magnetism at optical frequencies, perfect absorption, and enhanced nonlinear optical properties, to name a few. Such extraordinary properties provide people with powerful tools to manipulate electromagnetic waves in a wide range of frequencies, from acoustic waves up to the optical regime. Therefore, metamaterials have been realized for a great variety of applications, such as electromagnetic shields, polarizers, energy harvesting, etc. The main purpose of the proposed Special Issue is to explore aspects of metamaterials, both theoretically and experimentally, in order to understand in depth the origin of their fascinating properties. In addition, the present Special Issue aims to gather recent progress in possible and potential applications of metamaterials. Since both theoretical and experimental investigations are still being carried out in the area of metamaterials, this specified issue will contribute towards such a direction.

## Guest Editor

Dr. Zacharias A. Viskadourakis

Foundation for Research and Technology-Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), N. Plastira 100, GR-70013 Heraklion, Greece

## Deadline for manuscript submissions

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*Materials*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

## 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

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