



## Ultrafast Nonlinear Properties of Near-Zero Index Media and Metamaterials Out of Equilibrium

Guest Editors:

**Prof. Dr. Marco Ornigotti**

Laboratory of Photonics, Physics  
Uni, Tampere University,  
Korkeakoulunkatu 3, FI-33720  
Tampere, Finland

**Prof. Dr. Andrea Marini**

Department of Physical and  
Chemical Sciences, University of  
L'Aquila, Via Vetoio 10, I-67100  
L'Aquila, Italy

Deadline for manuscript  
submissions:

**closed (20 April 2020)**

### Message from the Guest Editors

Dear Colleagues,

Currently, there is a boom in studies on nanophotonics structures, as these systems possess a very high potential for integrated, multi-purpose optical devices, where sources, manipulation, and detection techniques of classical and quantum light can occur in a single chip. These devices may deliver impactful results in different fields of physics, such as communications, sensing, imaging, and automotive, to name a few. A very successful aspect of nanophotonics structures concerns their extreme versatility that allows the on-demand tailoring of their properties, such as emission, absorption, propagation, and storage of light, in a virtually arbitrary way. Among this vast and thriving research field, metamaterials have been the subject of extensive research in the last decades, because of their unique features in terms of local field enhancement and nonlinear properties at the ultrafast scale.

In addition, this Special Issue aims at representing a reference for an emergent and active community, with the ultimate goal of providing inspiration for future research and collaborations within this community.

Prof. Dr. Marco Ornigotti

Prof. Dr. Andrea Marini

*Guest Editors*





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**

Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](https://twitter.com/Applsci)