

## Special Issue

# Advances in Photonics and Optics: Materials and Structures for Emerging Applications

### Message from the Guest Editors

This Special Issue aims to bring together theoretical and experimental contributions to illustrate the latest advances in the fields of photonics and optics originating in the engineering of structures, materials or their synergistic combination, to outline research trends in addressing current and future challenges. For example, metamaterials, freeform optics, and transformation optics have highlighted the power of this intelligent synergy in controlling the local or orbital properties of light, enabling the enormous potential of optical and photonic devices to be unleashed in a boundless range of applications. In addition, two-dimensional materials, liquid crystals and phase-change materials can further enhance this paradigm by revealing new capabilities and functions even in traditional dielectric or plasmonic structures, such as cavities, couplers, optical interconnections and photonic crystals. Possible areas in which the intelligent and combined exploitation of the properties of novel geometries, structures, and materials has brought breakthrough innovations include telecommunications, sensing, imaging, computing, energy, and biomedicine.

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### Guest Editors

Dr. Giovanni Magno  
Dr. Marco Grande  
Dr. Ilaria Marasco

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### Deadline for manuscript submissions

closed (31 January 2025)



## Applied Sciences

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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