



Opto-Thermo-Mechanical Interactions in Nano-Objects and Metasurfaces

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Message from the Guest Editor

The interplay among optics, thermics and mechanics is of paramount importance for technological applications. For instance, in devices exploiting electromagnetic radiation, such as antennas, it is crucial to control the working temperature in order to avoid overheating or system damages. On the other hand, light can be exploited to apply forces and deformations at the micro- and nanoscales.

Metallic and dielectric nano-objects and metasurfaces proved very useful to concentrate light and to enhance the electromagnetic field. These geometries are the perfect playground where the opto-thermal and the optomechanical interactions may be sought. The opto-thermo-mechanical interactions in nano-objects and metasurfaces still pose puzzling questions, and several challenges remain to be explored for the design and realization of next-generation optical devices.

The scope of this Special Issue is to tackle recent and promising achievements in the field of linear and nonlinear opto-thermo-mechanical interactions in nano-objects, metamaterials and metasurfaces of nanostructures. We are also open to new materials that can be patterned and exploited for nanostructures engineering.





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