Special Issue

Enhancing Light-Matter Interaction by Metastructures for Sensing Applications

Message from the Guest Editor

In the past few years, there have been considerable advances in the fundamental and application studies of metamaterials and plasmonics. They demonstrate great advantages in optical sensors for the detection of biomolecules, chemicals, gases, and so on. The use of artificially engineered nanostructures or microstructures (i.e., metastructures) plays a critical role in manipulating the optical field in order to enhance light–matter interaction for sensing. To date, a large variety of high-performance functional sensors based on metamaterials and plasmonics have been proposed and investigated. We thus think this is a timely opportunity for the metamaterials and plasmonics community to bring together recent scientific and technology-based discoveries in this Special Issue, which focuses on the sensing physics and applications of metastructures.

keywords:
- plasmonics
- metamaterials and metasurfaces
- metastructures
- 2D material-based metamaterials
- light-matter interaction
- refractive index sensors
- immunosensors
- biomarkers
- theoretical and simulation studies

Guest Editor

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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