Special Issue

Electrodynamics of Hybrid Nanostructures

Message from the Guest Editor

Electrodynamics is about what happens when an electromagnetic field meets matter. At nanoscale, this encounter triggers a variety of physical phenomena that reveal a plethora of novel properties of the material that can be tailored to devise different kinds of hybrid systems and devices. In particular, combining a magnetic material with a plasmonic nanostructure, in the so-called *magneto-plasmonic nanostructure*, provides us with an additional handle for controlling the electrical, magnetic and optical properties of such structures. This is achieved through coupling of electric and magnetic fields to the charge and spin degrees of freedom of the underlying material, producing several rich non-linear effects. This Special Issue will provide an up-to-date snapshot of the current fundamental research on the interplay between charge and spin excitations in hybrid nanostructures, to understand the ensuing physical phenomena and related issues, their current benefits and limitations, fostering new fundamental research and applications.

- charge and spin degrees of freedom
- nanomagnetism, plasmonics
- hybrid nanostructures
- magneto-plasmonic effects
- theory and experiments

Guest Editor

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Message from the Editor-in-Chief

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