Special Issue

Theoretical and Experimental Electromagnetics of Graphene and Nanocarbon Materials

Message from the Guest Editors

Many efforts have been invested to understand the outstanding electromagnetic properties of carbon nanotubes, graphene, and other forms of nanocarbon. In order to predict the electromagnetic response of an ensemble of individual inclusions, their electromagnetic response should be modeled by means of ab initio calculations, semiclassical theory, and classical electromagnetics, combining with relevant effective medium and percolations theories/simulations. Regular and irregular structures, metamaterials and metasurfaces, and architectures are further numerically or analytically modeled. Plenty of experimental techniques are known to be able to obtain a wide collection of data. Along with conventional approaches, highly sensitive resonator-based and photonic jet approaches allow monitoring electromagnetic properties with super-resolution. Tuning and adjusting the constituent properties of materials allow designing a variety of electromagnetic devices, whose robustness may be controlled at many levels. All these subtopics represent the focus of the present Special Issue on theoretical and experimental electromagnetics of graphene and nanocarbon materials.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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