Special Issue

Optical Spectroscopy of Low-Dimensional Quantum Materials

Message from the Guest Editor

In recent years, since quantum emitters were found in various 2D materials, there has been an increasing interest in their quantum optical properties, and 2D materials have become a key platform for applications in photonic quantum technologies.

Optical spectroscopies such as Raman, absorbance, and photoluminescence represent a powerful tool to investigate the structure, the electronic, and the optical properties of low-dimensional materials and their heterostructures. Time-resolved spectroscopy allows researchers to investigate fundamental issues defining the electronic states' dynamics, such as radiative and nonradiative decay channels. The coupling of optical spectroscopy to high-resolution microscopy offers unprecedented opportunities to resolve spatial inhomogeneities and new nanoscale phenomena, such as polariton propagation.

This Special Issue in envisioned as a forum for the discussion of the latest findings in the optical characterization of low-dimensional materials and of their future applications in optoelectronics and photonic quantum technologies.

Guest Editor

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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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